


COMPARISON TEST: KAWASAKI VERSYS 1000, SUZUKI V-STROM 1000, YAMAHA FJ-09

# MOTORCYCLIST

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Rider shown with Signet-Q Pro-Tour Black Frost.



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Signet-Q Pro-Tour, Tactical White



Defiant Pro-Cruise, Mimetic Green

No helmet can protect the wearer against all foreseeable impacts. Nothing is a substitute for safe riding practices.



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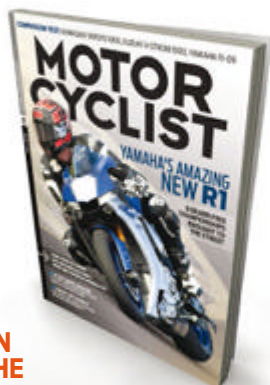
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# BLURRING THE LINES

Happens every time we cover bikes in the so-called adventure-touring (ADV) segment. Someone writes in to say, “You clowns don’t know what you’re talking about. Those aren’t dirt bikes! You’d never ride your Blah-Blah 1200 any farther off road than a gravel pullout. Those bikes are a joke. If you want a real dirt bike...” and continues on to sing the praises of a KTM 450 EXC or maybe a KLR650—two bikes we happen to admire, by the way, even if they don’t warrant a 5,000-word missive.

I have to admit that the guy’s not wrong. As Ari Henning, Zack Courts, and I sat on the bluffs near the Pigeon Point Lighthouse looking at the three “ADV” bikes brought together for this month’s big comparison test, we talked a lot about how the term has drifted from a very specific kind of bike to one that

manufacturers jumped in with versions of their own, whether or not they had suitable platforms.

Back here in our world, as motorcycling began to embrace the idea of going “round the world” on a BMW GS—the prototypical ADV machine—two things happened, in my view. First, a bunch of guys simply wanted bikes that *looked* like they could go anywhere, even if they never intended to leave the highway. Or their own state.

But the second thing that happened is why I think the segment has legs: We’ve discovered they’re really damn practical and fantastically fun to ride. ADV machines, as a rule, have more upright ergonomics (high-ish handlebar and plenty of legroom) and provide a fantastic view of the road. Plus, you usually get low steering effort considering the bikes’ heft. (Full disclosure: I dislike heavy-steering bikes.)

For me, the feedback from the wide-set grips gives me great confidence in what the front tire is doing. I love the sensation of pushing a tall bike over into a turn—its height emphasizes and even exaggerates lean angle. I find bikes like this are easier to place in a lane, more willing to change lines in case of road debris, and simply more exciting to ride quickly. No doubt a

hard-core supersport is faster, but if I’m riding on the street—at a rational street pace—I’m grinning bigger on an ADV than I am on a supersport. But that’s just me.

With an ADV, you get just enough wind protection to make highway travel less trying, and long-travel suspension that gets us down our increasingly marginal roads with ease. My point is that there are advantages to melding some dirt bike design elements into a modern, distance-capable streetbike.

Let’s agree to tolerate some breadth in the definition of ADV. Some bikes positioned here by their manufacturers are just tall sport-touring machines or today’s version of the erstwhile half-faired standard. Remember those? I do, with no small degree of fondness. Some ADVs have real off-road chops—like the BMW R1200GS Adventure and KTM 1190 Adventure R—but most do not. In the end, dirt-like “adventure” styling doesn’t bother me a bit, and you can’t see so much of it from the saddle. Give me a good time and practicality over strict adherence to a category definition any day.



**KTM’s Adventure series is just one example of the dirt-to-street drift in the ADV category.**

“The term ADV has drifted from a very specific kind of bike to one that encompasses a wide range.”

encompasses a wide range of hardware. Two of the bikes in our view wore 17-inch wheels front and rear, sportbike-sized tires, and had enough low-slung bits that you wouldn’t take them much farther off road than you would a GSX-R.

Confusing, but oddly familiar. Because our situation is not far from what happened in the auto world with SUVs. Today the term SUV covers everything from a boxlike Jeep (with real off-road credentials) to a high-heeled little station wagon with painted-on attitude. When the practicality of early SUVs began attracting buyers, so many



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Expect new things from Indian. There are rumblings regarding more variations featuring the Powerstroke 111 powerplant—perhaps a Chief chop-job to create a simple cruiser or a more custom-styled bagger.

First there were boxers then came the bricks... Recent patent documents (below) suggest W-3s might be BMW's next powerplant design.

KAR LEE

# BMW W-3 CRUISER

A Radical Triple Could Power Beemer's Next New Platform



It's been a decade since BMW cancelled the R1200C, but the firm has always intended to make a return to the cruiser category. Now we've seen the first indications as to how it will go about it.

Not only had the R1200C failed to capture the enthusiasm of cruiser buyers, but the boxer twin wasn't suited to the large-capacity trend that the market has followed. Switching to a V-twin would be too much like following the herd, but the firm has now hit on the idea of using a novel W-3 engine layout—creating a machine that can wear familiar cruiser clothing but which will also be unlike anything else on the market.

So far, BMW has patented two variations on the W-3 engine. Both appear to be air-cooled, which means the engines will have the clean, simple visual appeal necessary for a cruiser and will use pushrods instead of overhead cams, a decision that allows larger-capacity engines in a smaller space. The W-3 layout offers an advantage here, too, since it can fit an extra cylinder (and hence 50 percent more capacity) into much the same space normally taken up by a V-twin engine.

## HOW THE W-3 WILL WORK

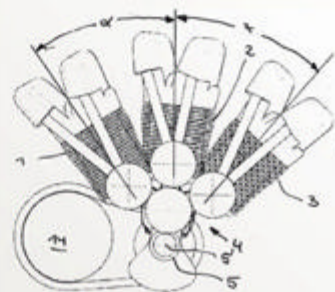
There have been previous W-3 efforts, most notably Jim Feuling's Harley-derived engine, which has powered several jaw-dropping customs over the years. Where BMW's designs differ is the use of more than one crank throw.

In one design, the firm has used a three-throw crankshaft, more like an inline-triple than a V or W where you'd expect more than one piston to share a single crankpin. While the result is wider than a V-twin, it still offers the all-important visual effect and allows the use of virtually any firing order or interval.

The second layout is even stranger, with two cylinders sharing a crankpin, in normal V-twin style, while the third piston gets its own crank throw, again, allowing freedom with regard to firing interval. This design is narrower than the first while still gaining the all-important extra cylinder.

Unlike the Feuling W-3, which had a 90-degree angle between the first and third cylinders, the BMW layouts show a total of 75 degrees for the first design and 65 degrees for the second. That's much closer to a conventional V-twin cruiser engine dimensions, meaning a bike carrying the BMW engine could follow traditional styling cues despite the extra cylinder.

—Ben Purvis



## Honda Forza vs. Suzuki Burgman 200

Midsize Scoots Go Head to Head Online

An explosion of new options in the midsize-scooter market got us wondering: Which one's the best? To the garage, then, where Honda's 279cc Forza and Suzuki's Burgman 200—fresh off the boat from Europe—waited to duke it out.

The Forza impressed us with high build quality, a crisp CVT, and tight handling, then shocked us with a \$5,599 base price. Suzuki's Burgman 200 is less stylish, but excellent under-seat storage and much better weather protection resonated with the pragmatists on staff. Also, at \$4,999, there's \$600 to be saved.

We ultimately agreed that we would splurge for the extra 79cc of the Forza. What can we say? We're suckers for power and handling! For the full test and photo gallery, go to [motorcyclistonline.com](http://motorcyclistonline.com).





# 10 QUESTIONS with: KTM President & CEO Stefan Pierer



## Sitting Down with the Leader of Europe's Largest Motorcycle Maker

**K**TM produced more than 120,000 motorcycles (including Husqvarna products) at its Mattighofen, Austria, facility in 2013, creating the highest revenue in company history (716.4 million euros) and making KTM the largest European motorcycle manufacturer, ahead of even BMW. With the firm so clearly hitting its stride, what better time to talk business with Stefan Pierer, the man in charge of both the KTM and Husky operations?

—Alan Cathcart

**MOTORCYCLIST:** What was the balance of KTM streetbikes built in 2014, compared to off-road models?

**STEFAN PIERER:** This was the first year that on-road is bigger than off-road. Although we also had an increase in off-road sales, on-road is growing much faster than anything else.

**MC:** It also seems like you successfully turned Husqvarna around post-BMW.

**SP:** Husqvarna sales in 2014 were the all-time highest in 110 years, at 15,000 units, which I admit was beyond my expectations. I believed the brand had a huge potential, especially in the US.

**MC:** What's the projection for Husqvarna's sales volume in the future?

**SP:** Husqvarna has to become number three in Europe. It's very simple: Number one is clearly KTM; number two is my favorite competitor, BMW; and number three must be Husqvarna. So it's a clear message that with Husqvarna we have to overtake first Ducati then Triumph.

**MC:** Where do electric bikes fit into this growth?

**SP:** We've had a very good demand [for the Freeride E] from a specific group of customers who want to have something silent they can ride in their garden or neighborhood. I like this approach through sport and racing because otherwise you are just providing mobility with electric

power, and this is not sexy—yet. But I'm convinced that in 10 years' time a major part of urban mobility will be based on electric vehicles.

**MC:** What sales volume is KTM looking to achieve with electric bikes?

**SP:** We are starting with a 2,000-unit production volume in 2015 for the three versions of the Freeride E. With the street-bike coming two years from now, let's say by 2020 we want to achieve 10,000 units a year together with the off-road E-models. Building up to 10,000 units a year by 2020 is our goal.

**MC:** How about the rumored MotoGP machine? Will it be a 75-degree V-4?

**SP:** No, it's in fact slightly less than 90 degrees so as to have more flexibility on the front end on the different tracks—that's what we have learned by studying closely what the others are doing. You will see a tubular frame, just as in Moto 3, where we showed the whole world that the tubular frame is much better than anything in aluminum—contrary to what Ducati seems to think, they have the total opposite opinion.

**MC:** What's the timeline for the MotoGP project?

**SP:** By May or June this year the engine will run on the dyno, and we expect to make our first tests sometime in the autumn. We plan to go racing in 2017 for

the whole season, but maybe at the end of 2016 we can do a couple of races as wild cards to get some race practice.

**MC:** No mention of off-road racing yet. Does this suggest KTM will make any changes in that direction?

**SP:** No, no, *no!* Maybe from the outside it looks like everything is heading towards on-road due to the huge success we're having with our sales, but in off-road we are still the market leader and still the benchmark. In the upcoming 2016 model season you will see a totally new Motocross range which is state-of-the-art with new engines, new chassis, new everything.

**MC:** It sounds like KTM is in very good shape. What are your future plans for the company?

**SP:** We have a very ambitious strategic plan for 2020, by which time we want Husqvarna to be the number three European manufacturer and for us to become the global number three among the sports motorcycle manufacturers. That means we have two Japanese to completely overtake—we already passed Suzuki in all developed markets. Kawasaki is still in front of us, but we are coming closer.

**MC:** What will it take to achieve this?

**SP:** We will build 250,000 units in the various different sectors, with both brands—Husqvarna and KTM.



KTM will build 2,000 units of the Freeride E electric off-roader in 2015; the goal is to build 10,000 e-bikes annually by 2020.



KTM on-road sales eclipsed off-road sales for the first time in 2014, thanks to the popularity of new models like the RC390.



Under KTM's careful guidance, Husqvarna just enjoyed its most successful year ever, selling more than 15,000 total units.

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UP<sup>TO</sup>SPEED

## ZERO GROWS UP FOR 2015

ACROSS-THE-BOARD  
UPDATES SIGNAL  
E-BIKE MATURITY



The big news for Zero Motorcycles ([zeromotorcycles.com](http://zeromotorcycles.com)) in 2015 isn't that Chief Technology Officer Abe Askenazi has created his own kind of Mr. Fusion or invented a battery with the energy density of gasoline. (He wishes!) Nope, it's that Zero has grown into the kind of company to get the attention of Showa, Bosch, Pirelli, and Spanish brake-maker J. Juan. Improvements throughout the line stem from these strategic alliances.

### ZERO SR

Thanks to permanent magnets capable of handling higher temperatures before de-magnetizing, the SR (shown above) puts down 67 hp and 106 pound-feet of torque—compared to 54 hp and 68 pound-feet of torque for the S and DS models. It's quick off the line and capable of running 100-plus mph for a short time or 85 mph sustained. Cautious motor-controller programming keeps it from being a wheelie-prone, tire-smoking beast. It's actually smooth, quiet, and easy to ride. Ridiculously easy to ride, in fact.

Thanks to new Showa suspension, the SR rides well and now, thanks to J. Juan and Bosch, stops in contemporary fashion too. ABS is now standard across the line.

Revised battery chemistry for the SR, S, and DS models increases range slightly. The SR carries the largest internal battery pack (12.5 kWh capacity, max), good for a claimed 151 city miles or 102 miles of combined city/70-mph highway riding. Add the 2.8-kWh Power Tank cell and you can go 185 and 125 miles, respectively. Prices start at \$17,345.

### ZERO S AND DS



Although they look fairly different, the S (top) and DS (bottom) share the same basic chassis, motor, motor controller, and battery-pack options. A straight-up street-bike, the S has three-quarters of an inch less suspension travel and conventional 17-inch wheels while the DS has a 19/17-inch combination rolling on Pirelli dual-sport tires. A taller bar gives the DS the impression of being larger.



Both feel less powerful next to the SR, but for commuter-centric missions they're more than quick enough. Baseline battery packs are 9.4 kWh max capacity, but you can upgrade to the 12.5 kWh pack and also add the 2.8-kWh Power Tank. Range mimics the SR's with the same battery capacities but is 113 miles city and 76 miles combined city/70-mph highway with the smallest-capacity battery. Prices start at \$13,345.

### ZERO FX



The FX is Zero's hooligan machine. It feels like an enduro bike that somehow got licensed for the street, with a compact riding position, tall suspension, and a character that encourages you to wheelie and hop curbs. With its largest battery pack (5.7 kWh maximum capacity), the 289-pound FX is a massive 92 pounds lighter than the DS with its smallest pack. The difference feels greater. Its 44-hp engine (27 when you get just the single 2.8-kWh battery pack) puts out 70 pound-feet of torque, in a light, 56.6-inch-wheelbase chassis. Range is 70 miles city and 42 miles combined city/70-mph highway. Prices start at \$9,845.

—Marc Cook



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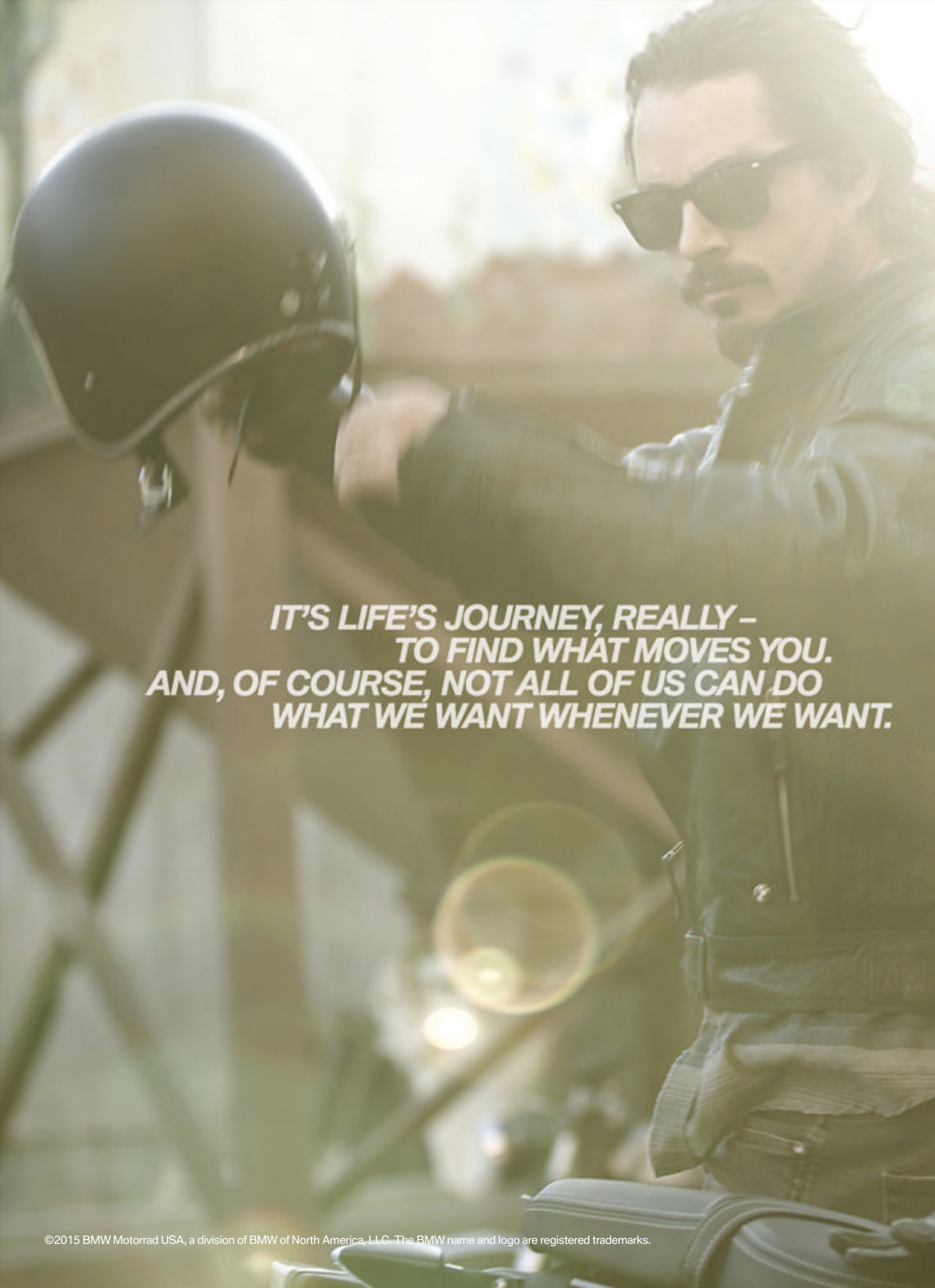
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A man with a beard and sunglasses, wearing a dark leather motorcycle jacket, is holding a black motorcycle helmet. He is looking down at the helmet. The background is a blurred city street with warm, golden light, suggesting a sunset or sunrise. The overall mood is contemplative and adventurous.

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JACK LEWIS



# MAPPING JORDAN

When I haven't been somewhere in a while, I always go to the Can first. No, not—never mind. Yes, that one too. The Can is a 7.62mm ammunition can stuffed with maps. Some are velvety, tissuey, greasy, and gray with use. That's how you identify the good ones. Other maps huddle in various spots—tank bag covers, car door compartments, riding jackets—but it's the Can where the good stuff sleeps.

About an hour north, Jordan Road is a worthwhile exercise. Scenic, variegated, rippled, and humped, J-Road wanders north out of Granite Falls to run between ranches and hillsides, nuzzling the South Fork of the Stillaguamish. I ride Jordan for the same reason pianists run the scales.

My route to Jordan is plotted in dingy orange highlighter on a superannuated WSDOT map. We could replace it every year for free, but maps, like jean jackets, gain value as they age until, when well-nigh perfect, they more or less vaporize. This one charts years of good eats, scenic vistas, Pretty Girls, flashy bikes, oases to rest and think. It also records whipping storms, downed trees, icy roads, and scores of unintentionally homicidal drivers: HC SVNT DRACONES. Smudges on the map.

When I disinterred my neatly folded map, it appeared as respectably complete as a middle-aged BMW jockey, dressed

“Maps, like jean jackets, gain value as they age until, when well-nigh perfect, they more or less vaporize.”

up snappy in world-proof gear. Unfolding it revealed heart rot, a punky hole that could fail all the way to the edge at one clumsy swipe. Cautious as a curator, I slipped it under the yellowing window on my tank bag, smiled nervously at Pretty Wife, and we bobbed off toward the far edge of Snohomish County.

Wobbling like a meth-addled three-patcher, I sawed my way through a half-dozen apexes per curve, unable to trust my body, my bike, or that fine, familiar road. Whatever broke inside me last summer wasn't just my spine. Every move I planned drained away through that anxiety-fringed hole in my middle, Black Betty snorting and bucking as any mount will when she suspects her rider.

Halfway along, we hauled down at Jordan Cemetery. Smooth and fast on fine bikes, I've blown past its pullout a dozen times, but this ride demanded a break.

Pretty Wife pulled up, hopped off her Strumpet, and wordlessly took my hand. No bird chirped as we shuffled up the grass drive to an iron gate opening onto old markers of the ends of roads.

They may as well have been runestones. Each flat rock remembered some tough towhead: Engstrom, Jonson, Erickson, Knutson. There weren't any Peterrsons; my people lie south in The Dalles. They weren't soft-handed writers either. They farmed and drank and felled big timber, and plenty of their markers bear smaller numbers than mine would, were it carved in stone today.

When I crayoned the first lines onto my personal atlas, I never imagined it would bear me past the state lines of Oregon, but it's a big, blowsy thing now, stitched together of mismatched colors and strange terrain, undifferentiated pages

of nonsense and meaning loose-bound at their edges, illuminated by angels and monsters all racing outward from the center.

Where the hole is.

I never knew those squareheads quietly planted along my favorite road, but my debt to them is plain:

not to cosset my map in the hermetic safety of the Can but to hold it close and wear it through, to etch plans and memories onto it until they're overlaid and interlaced like full-cuff tattoos. To tape up that hole in the middle, smoothing those jagged lines back into smooth sweepers with warm, unshakeable, grease-nailed hands.

And then to ride the whole territory, all the way to its frazzled edge, until I meet them there.

**A well-marked map charts more than just roads. A stack of well-marked maps is an invaluable asset.**



Jack Lewis writes preternaturally clean copy, grievously stained by filthy words. In addition to journaling his motorcycle misadventures in *Motorcyclist* and on *jaxworx.com*, Jack has released books including an Iraq military memoir titled *Nothing in Reserve* and the definitive work on (Jack's) motorcycle riding, *Head Check*. We recommend them.



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# NO BRAKES

Last summer we did an experiment with one of our California Superbike School students, 16-year-old AMA Pro roadracer Joe Roberts, at New Jersey Motorsports Park's "Thunderbolt" circuit. Guidelines for this test were simple: Lap the circuit in fourth gear only, without touching the brakes, riding one of our stock BMW S1000RRs. It had been years since I'd asked a pro racer for lap times under those riding conditions.

Joe has the right go-fast credentials: He still holds the Red Bull Rookies Cup lap record at Brno in the Czech Republic, set three years ago. In 2013, between Rookies Cup rounds in Europe, Joe entered five AMA Pro-SuperSport races—and won them all. He can ride.

Despite riding on well-worn Dunlops, Joe recorded a 1:32.3 lap—without using the brakes. That's just 12 seconds slower than the AMA Pro Superbike record at that course and about seven seconds off winning CCS literbike club-racing lap times. It goes without saying that would be a more than respectable trackday lap. But what does this say about good braking habits?

In response to the multitude of braking errors we repeatedly observed at the school, we first instituted a fourth gear/no brakes riding exercise for students way back in 1983. There are as many braking errors as there are different approaches

to braking, the most glaring being inconsistent corner-entry speed. Accurately predicting your line, midcorner speed, steering rate, lean angle, and apex are all difficult at best when your entry speed fluctuates from lap to lap.

The theory of the no-brakes exercise is simple: Proper braking all begins with the rider's own sense of speed, and with or without brakes (and gears), speed decisions are based on an intimate, intuitive ability to process bike feel. Physical sensations and visual feedback provide the raw information to make accurate speed adjustments. The no-brakes exercise—which is just that, an *exercise*, not a riding technique per se—is a particularly effective way to sharpen and develop one's own sense of speed.

Like a computer's virus-detection program, our sense of speed should be operating all the time to catch errors and guide how quickly or slowly we pull and release the brake lever to achieve an acceptable entry speed. Corner-entry speeds for a pro racer are typically very consistent, often varying by less than 1 to 2 mph from lap to lap. Average riders may vary 5 mph or more. Humans have this facility innately, but it does improve with practice.

Braking is an essential skill to master, and good technique demands continual comparisons of multiple factors including: bike pitch in response to braking force, lever pressure changes, rate of deceleration, lean angle if you are trailing the brakes, location on the road (or track), estimated line based on current rate of deceleration, and more. Maintaining a firm grasp on the objective—optimum entry speed—becomes an art under these conditions.

Hard braking requires even more attention, and the harder the braking effort, the more attention it absorbs—which can cause awareness of your entry speed to suffer. Improving and fine-tuning your sense of speed by removing the distractions of braking and downshifting is the purpose of the one-gear/no brakes riding exercise. Braking and corner entries both improve proportionately with the rider's trust in his sense of speed.

A safe environment such as a trackday or riding school is the ideal place to practice this exercise. However, I'm willing to wager that the results might help you achieve a new level of riding confidence and personal satisfaction no matter where you ride.

**It sounds counterintuitive, but experiments with pro racer Joe Roberts showed that you can learn a lot about proper braking technique by riding without using brakes.**



*Keith Code, credited as the father of modern track schools, founded his California Superbike School in 1980 and currently operates programs in 11 countries and on six continents. His A Twist of the Wrist series of books (and DVDs) are thought by many to be the bible of cornering.*





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JAMES PARKER



# TALE OF TWO FORKS

Lately I've fielded a few questions about BMW's decision to use a conventional fork on the all-new R1200R, rather than the Telelever used on preceding models. Is it an issue of cost? Handling? Weight? Or is BMW admitting that there is something wrong with the Telelever design?

With BMW reverting to a conventional fork on some key models, I thought it a good time to look closely at the Telelever design. For my benchmark Telelever bike I chose the 2012 BMW HP2 Sport, which may be the ultimate Telelever-equipped BMW performance bike. There are a number of high-quality CAD illustrations of the HP2 available; these, plus published specs, made analysis of the HP2 Telelever relatively easy. Rake angle is listed at 24 degrees, a fairly conventional sporting number. Trail, on the other hand, is a very aggressive 3.38 inches. Compare that to Ducati's 899 Panigale that has the same 24-degree rake but 3.8 inches of trail.

One might expect the Ducati to have the more aggressive number, but it doesn't. That 3.38-inch number would likely give a bike with a conventional fork such quick steering that it would verge on instability. But the HP2 doesn't have

**"Is BMW's decision to use a conventional fork an admission there's something wrong with the Telelever?"**

a conventional fork; it has a Telelever. While a conventional fork's rake angle and trail *decrease* as the fork compresses, the Telelever's rake angle and trail *increase* as the suspension moves from full extension toward full compression.

That's because the end of the arm (or the "lever") that braces the Telelever travels in an arc that actually moves that steering pivot forward. Since the top of the Telelever fork pivots in a spherical bearing directly beneath the handlebar plate, that movement causes the fork's rake to increase, as the top remains fixed and the pivot above the wheel moves forward.

What surprised me as I drew up schematic illustrations of the Telelever at different points in its travel was just how much the rake angle and trail changed as the wheel moved through its 4.7 inches of travel: Rake increases about 5 degrees, and the gain in trail is close to 1.2 inches. In percentage terms, rake increases 20 percent and trail increases by 35 percent! Averaged over the length of the stroke, Telelever's rake is approximately 26.5 degrees and trail is approximately 3.9 inches—much less aggressive than it seems at first glance.

The geometry of the Telelever is unique, but it obviously does its job well. So why change? There are a few possibilities: Because of its variable geometry, Telelever feedback may feel less precise even as it delivers improved ride quality. A conventional fork may cost less overall and may weigh less too, but I think the biggest reason for the change had, ironically, nothing to do with suspension. It's the radiator. The latest version of BMW's signature boxer engine is liquid-cooled and thus needs a radiator, and a radiator can't be located in the conventional central location with the Telelever because

the suspension arm swings through that area. On the GS model the solution was to fit two radiators, one on each side of the Telelever arm. Because the GS has a wide handlebar and dirt bike-like radiator shrouds, the wider, two-radiator setup worked in terms of styling and ergonomics. (Dual radiators work into the RT's styling as well.)

This wasn't the case with the roadster; to allow a conventional radiator arrangement, the Telelever had to go.

I'm sure as BMW planned its new models there were entire lists of pros and cons for a conventional fork and for the Telelever that were discussed. The decision wasn't made for just one reason, but the radiator concerns were probably near the top of any list.

**A look beneath the bodywork of the 2012 BMW HP2 Sport, the last true sportbike equipped with the Telelever fork design.**



*James Parker designed his first original motorcycle in 1971; his most recent design is the Mission R electric superbike. In between, he worked on multiple other motorcycle projects, including 30 years spent evolving the RADD front suspension system used on the Yamaha GTS1000 and various other prototypes.*





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## RUBY'S RIDE

I read with a warm heart Aaron Frank's story ("Ruby's Ride," March, *MC*) of this sidecar purchase and ride with his daughter Ruby. It reminded me of the years my children spent with me in the rig we put together, my daughter in the chair and my son behind me, as we followed their mother on her bike. The bike was a



fully outfitted old-school tourer based on a 1979 Yamaha XS1100 that the previous owner had left to languish. The sidecar was a Velorex 700 model that I rescued from a small BMW shop. We dubbed them Wretched XS and XS Baggage, due to electrical problems we suffered for the first year until a fellow "chair" owner told us a car battery in the rig would supply needed ballast and electrical power. Aaron's article helped me remember how our rig helped us ride as a family for many years.

**Philip J. Lepel / Macedon, NY**

I read your "Ruby's Ride" with tears in my eyes. My own daughter and I, years ago, drove to a local drive-in and purchased *one* Coke to share. She was three at the time. Unknowing, I was starting a unique tradition that lasted through college. About two or three times a week, Lindsey would come up to me and kind of whisper, "Dad, let's go get a Coke." And, of course, we did. For the next 18 years. My daughter is married now, with two kids of her own, and I can only hope son-in-law Danny picks up this simple but unforgettable activity with his daughter Madie and son Micah.

**Keith Ingram / Clovis, NM**

Short and sweet. Thanks, Aaron. Your sidecar adventure had me smiling. Wow, how amazing our first journey on two (or three) wheels can become. Congrats on a wonderful family and memories that will live on forever!

**Steve G. / Miami, FL**

# Ruby's Ride Above All, Motus Commotion

## LETTER OF THE MONTH

### Ruby Rocks It

I wanted to send a sincere thank you to Aaron Frank for his article, "Ruby's Ride." As an 80-hour-a-week firefighter and father of three younger children, I always find it hard to reconcile my love for long-lost highways on two wheels with being a good (read: mostly present) dad. Aaron's article really struck a chord with me.

In it he has managed to express with clarity not only what it means to be a motorcycle lover but a "motorcycle dad." He's given me the inspiration to create my own Hansel & Gretel to try and share more of myself with my children so that they might, in turn, share more of themselves with me. Thanks, Aaron, for setting the bar just a little higher.

**Rock Domineck / via email**

*Thanks, Rock. And to get you started on your own project is a set of R&G Aero indicators from Twisted Throttle. Fitted with clear lenses and including an LED that illuminates at the end of the stalk, the \$99 Aeros come in black or silver. —Ed.*



Last evening I sat down with my March 2015 issue of *Motorcyclist*, found "Ruby's Ride," and devoured a most wonderful read. Thank you to Aaron and Ruby for sharing their heart-warming story of Hansel & Gretel. Sidecars can do that: make life worth living.

**Pete Dopson / Sudbury, Ontario, Canada**

I just finished reading Aaron Frank's story, "Ruby's Ride." It's truly outstanding journalism. I read this article through misty eyes, and I'm sure that has never happened to me with an article in a motorcycle magazine before. Aaron, that is one clapped-out sidecar rig you own, but believe me when I tell you, you are a millionaire where it counts.

**Bob Campbell / Avondale, AZ**

### GET A HANDLE ON IT

Rather than bemoaning the insufficiencies of body steering, Mr. Code should parade his double-handlebar BMW as the amazing tool it is (*Code Break*, March, *MC*). The pure nature of motorcycle physics cannot be experienced with your hands on the bar. Only by riding freehand at speed can you experience and understand the forces that make the motorcycle and the jet aircraft so similar. Install a throttle lock and let go of the bar. You will then see how little body effort and change of aerodynamics it takes to control direction. Once you

know the freehand feel of your bike, you can better appreciate the true magic of countersteering.

**Mike Romans / via email**

### THE JACK AND JOE SHOW

Thank goodness for Jack Lewis. He is the reason I am still subscribing. His "Rode Map" (*Behind Bars*, March, *MC*) column convinced me he gets it. Few writers I have read over my decades of riding have been able to capture the essence of why we ride and continue to ride. His quips keep it humorous and engaging. Same for Joe Gresh. Their columns are looked forward to and missed when they are absent. As long as they keep writing, I will keep reading your magazine.

**Jerry Spinney / Vancouver, WA**

*So you're Jack's uncle or Joe's? —Ed.*

### MOTUS-DELECTI

I was thrilled to see the Motus MST article (*First Ride*, March, *MC*) after hearing about Motus and sitting on a pre-production bike at their display at Circuit of the Americas MotoGP last April. It was a great article with detailed ride-quality information. Coincidentally my favorite dealer is going to carry Motus, and I am signed up for a test ride when available. Thanks for the topical, detailed article.

**Dan Casey / via email**



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# ME & MY BIKE

**1996 Ducati  
M900 Monster**

**NAME**  
Karen Ide

**AGE**  
57

**HOME**  
San Francisco  
Bay Area

**OCCUPATION**  
Graphic Artist

I am an artist, a painter naturally drawn to vibrant colors. When I first saw a yellow Ducati on a dealership pedestal, it was love at first sight. A couple years later I got my M900. It came from a member of a wayward club called "When Pigs Fly," a bunch of Ducati-riding cops from the Bay Area. My bike has some high-performance mods: a 916 front end, Marchesini wheels, flatslide carbs, an Öhlins shock, and Remus pipes, to name a few. Plus, it was the right shade of yellow!

When I was 17 I told my mother, much to her horror, that I was going to get a motorcycle. My first bike was a Yamaha RD400, a boy-racer with BUB pipes, rearsets, low bars, and black spray paint to make it look cool. A blue RD followed, and then I graduated to a Moto Guzzi LeMans CX100 that sparked my love affair with Italian motorcycles. It wasn't just

visual attraction but also about the sound. I went from riding down the road buzzing like a bumblebee to setting off car alarms with that unmistakable low rumble. *Viva l'Italia!*

Two years ago, a driver talking on a cell phone rear-ended me while I was stopped at a red light. Thankfully I was in my car and not on my bike, but I was still seriously injured, and my hands are just now able to ride—and to pick up a paintbrush—again. I was lucky enough to check the Isle of Man TT off my bucket list recently, and that has changed my life and refueled my passion for bikes.

I've also started a series of paintings of my dream bikes, in oils. While I may not be able to own all the handsome bikes out there, I can still render them on canvas. The artist René Magritte once said, "Life obliges me to do something, so I paint." To that I add: "And I ride."





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## THEY SAY

"A MotoGP bike for every rider."

## WE SAY

"Shockingly, not that much of an exaggeration."

# 2015 YAMAHA R1 & R1M

A New Crossplane R1 Radically  
Ups the Superbike Ante



The good news for current Yamaha R1 owners? Your bike is still part of a long line of archetypal superbikes, feared both on the street and the track. An industry icon, even. The bad news? Your bike is now also obsolete. Almost any street-going superbike, really, has just taken a discernible step backward. You heard it here first: Yamaha's 2015 YZF-R1 is the next big thing.

To take such a huge leap forward, Yamaha contemplated and redesigned seemingly every part of the motorcycle. In addition, there was a serious shift in design philosophy. Yamaha admitted that for previous R1 models the focus of development was on road-going performance. That is no longer the case. For 2015 the orientation of the R1 is

track performance first; everything else comes second.

Just how painstaking is the process of creating a new-from-the-ground-up superbike to take on the likes of Aprilia, BMW, and Ducati? Let's start with a few numbers: Pistons are larger but 8.5 grams lighter than the previous R1's. The clutch is 7 percent smaller in diameter and 19 percent lighter. The bores, intake valves, and exhaust valves are all larger, yet the engine is 1.3 inches narrower at the crank axis. The engine is 8.8 pounds lighter than before but is more powerful than ever. Cast-magnesium wheels save 1.9 pounds, while the new gas tank is formed from three sheets of aluminum and is 3.5 pounds lighter.

The list goes on, but the upshot of all

of this laborious engineering, Yamaha claims, is a 439-pound wet weight, 197 crankshaft horsepower, and, overall, "the most technologically advanced motorcycle Yamaha has every put into production." (We're warned the horsepower will be less for US bikes, and weight will likely be a few pounds higher due to a more complicated exhaust pipe. We will test and update this as soon as we have a bike in our shop.)

Company test riders from all over the world were flown to Japan to ride Yamaha's M1 MotoGP machine in order to set goals for how the new R1 should behave. Racers too. Josh Hayes and Valentino Rossi did their part in contributing to the development of the R1. During the technical presentation





Yamaha went so far as to call it, “a MotoGP bike for every rider.”

Fitting, then, that our test took place at Eastern Creek Raceway’s Brabham Circuit, 2.8 miles and 18 turns of undulating, former-Grand-Prix pavement located 25 miles east of Sydney, Australia. The track’s mix of fast sweepers, obnoxiously tight hairpins, and blind crests meant the ultimate test of rider confidence, something the new R1 builds extremely well.

It starts with a much different riding position, with both the footpegs and seat being raised (the saddle is an inch taller for 2015 at 33.9 inches) to create 10mm more legroom and more than 2 inches more reach from the center of the seat to the clip-ons. The result is a

commanding riding position, well suited to the track. For the street it will feel aggressive, and the seat is very thin.

Engaging first gear and putting out of the pits, the shorter internal gear ratios are noticeable—first through fourth gears have been shortened, and final-drive gearing is also shorter. The engine revs more freely at low rpm, too, despite the focus of tuning for the new mill being on high-rpm power output. Yamaha claims the livelier feel comes from a multitude of small changes, from rocker-arm cam followers that allow lighter valve springs to an improved oiling system and less counterbalance weight for the crankshaft.

Once at speed the new engine feels incredibly smooth while still emitting

that lovely, Crossplane growl that has come to define the R1 over the past six years. A new Quickshifter System (QSS) is standard equipment these days if you want to be taken seriously in the supersport category, and it works beautifully. Linked brakes—or UBS, for Unified Braking System—are a new feature on the 2015 R1, with the front brake lever also applying pressure to the rear rotor (but not vice versa) above 12 mph. Our testing time with UBS was limited; it was disabled almost immediately for better track performance.

A full road test will likely bring to light some of the sacrifices Yamaha has made for track performance, but in our limited low-speed experience with the new R1 it seems perfectly docile. It’s





While the new R1 is more compact than its predecessor, it accommodates taller riders just fine. Below right: The R1's suspension is by KYB.

when the pace picks up that the R1 truly impresses. As quickly as the variable-length intake trumpets rise up and allow the engine to breathe through shorter velocity stacks the R1 switches from a calm, smooth, sporty machine into a razor-sharp track weapon.

As you ask the R1 to perform, you become very aware of all of the bike's actions. Throttle response feels incredibly connected to your wrist; the chassis is agile, willing, but amazingly stable. It changes direction, holds a line, and fires down straightaways in such a casual way that it almost feels like the bike isn't trying. The fork and shock (both by KYB) are fully adjustable and a definite upgrade from the previous model's in-house components.

The R1's foundation is extremely solid, no doubt a result of the obsessive engineering that went into the chassis, but it does have help from electronics. Lots and lots of electronics. Take a deep breath and stay with us here...

At the core of the component complex that makes up the R1's brain is a six-axis IMU, short for Inertial Measurement Unit (if you've read the accompanying Ducati 1299 Panigale S or KTM 1290 Super Adventure *First Rides* you already know this drill). This IMU tracks the bike's movement via three gyros, monitoring roll, pitch, and yaw, and three G sensors that measure the R1's accelerations left to right, up and down, and front to back, basically allowing the motorcycle to "feel" how it's moving. That data (from lean angle to rate of acceleration) is then shared with the 32-bit CPU, calculating as quickly as 125 times a second to control the Yamaha Ride Control (YRC) systems—read: traction control, ABS, etc.—that manage traction and stability.

A Launch Control System (LCS) is new for the R1, and it holds revs at 10,000 rpm to allow the rider to focus on only the clutch engagement. We tried it. It's neat, but further testing is needed to see if it's actually better than



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# R1M

You might be reading this thinking superbikes can't get any more complicated, but that would be to ignore one of the most exciting pieces of the 2015 R1 story: the R1M. This is what the HP4 was to BMW's S1000RR in 2013, except Yamaha has released them in conjunction. The \$21,990 M version is largely the same bike as the base R1—the basic chassis is the same, as is the spec of the engine—albeit with some (very) fancy bits added: carbon-fiber bodywork, a hand-polished aluminum gas tank and polished swingarm, and a wider, 200mm-wide rear tire.

Most notable is the Öhlins suspension front and rear, equipped with what Yamaha calls Electronic Racing Suspension, or ERS. This is the same technology applied to Ducati's new 1299 Panigale S, where the bike is designed to react to data from the IMU in order to stiffen, soften, and otherwise perfectly damp your attempt at the perfect lap.

All the while, your data is being recorded with a standard GPS-enabled Communication Control Unit (CCU), which tracks the bike's position (and therefore lap times) as well as 21 channels of data, received from the IMU and ECU. Lean angle, throttle position, speed, gear position, and intervention from all YRC parameters are compiled, fed to a graph, and available for the rider to read on Yamaha's Telemetry Recording and Analysis Controller (Y-TRAC) application for smartphone or tablet.


We were given three sessions at Eastern Creek aboard the R1M, which had been set up with slick tires and a 43-tooth rear sprocket (stock is 41) to compensate for the 200-65 rear slick's tall profile. In terms of power and braking, the upgraded bike feels very much the same, but the combination of slicks and Öhlins ERS make the R1M almost unflappable.

Every way you turn there is an electronic guide to save a misstep. About to miss an apex? Simply roll the gas on and point the bike where you want it to go; the shock will stiffen to maintain proper geometry, TC and SCS will save any slide, and when you power down the straight-away you'll pop through the gears wide open (thanks to QSS) in a perfect, low wheelie.

You will feel like Valentino Rossi, and it will feel good.

—Zack Courts





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## EVOLUTION

An all-new version of the R1, adapting even more MotoGP technology.



**Top:** The full-color LCD dash in Track mode, shown here, displays laptime and gear position prominently. Street mode emphasizes road speed. **Above:** Menu navigation is via this thumb wheel; spin up and down to change functions then click to select.

## RIVALS

Aprilia RSV4, BMW S1000RR, Ducati 1299 Panigale, Honda CBR1000RR SP, Kawasaki ZX-10R, MV Agusta F4

a manual launch. Yamaha's Lift Control System (LIF) manages wheelies in three levels of sensitivity, all of which work quite well. Setting 3 is the most conservative, trying to keep the front wheel on the ground. Setting 1 is the least intrusive and the clear choice for performance, hovering the front wheel perfectly above the pavement while allowing the bike to accelerate at maximum pace. It's brilliant, but one of the amazing things about the new R1 is that with LIF turned off, the bike is still completely manageable. There is enough power to wheelie out of every corner, but as long as throttle inputs are measured the bike never does anything but rear up gently and surge forward.

Less clear is the functionality of the new Slide Control System (SCS), a first for production bikes, Yamaha says. The system works in tandem with the traction control, using IMU data to sense and correct cornering slides induced by lateral forces rather than wheelspin. Switching SCS off and leaving the Yamaha Chip-Controlled Throttle (YCC-T) traction control system to work alone, it was hard to say slide control was necessary. The R1's traction control uses IMU data and curbs power to the rear wheel via throttle butterflies, fuel, or ignition, but each of the three interventions is independent depending on how abrupt the loss of traction is. Bottom line: SCS is amazing technology, but with a chassis this stable and a TC system this good, we

don't think it will have much work to do.

If adjusting all of these systems sounds daunting, park your worries: Yamaha is one step ahead of you. Four ride modes—A, B, C, D—provide presets to suggest appropriate YRC settings for the rider's ability or intention. The presets are editable, including four power modes that can be adjusted independent of ride mode, and each of the ride controls (TC, SCS, LIF, LCS, and QSS) can be switched off except for ABS, which always remains on. All of the electronics are controlled from two bar-mounted switches and displayed on a color LCD screen.

At this point it sounds like we're over the moon for the new R1 and the limited-edition M version (see sidebar) too. We admit to only having spent a day with the bikes, but just to be clear, yes, we are extremely impressed. The 2015 R1 is the new standard for how good a motorcycle can feel on a racetrack, and most impressively it accomplishes that without being a standout in any one category. It doesn't have the most power (we estimate about 160 hp at the rear wheel) and it's not the lightest, but it is so incredibly capable that none of the individual statistics matter. And despite being one of the most advanced motorcycles on the

market, the base price is just \$16,490.

The R1 isn't just more electronics and more options; it's everything done better. It's a new interpretation of what a street-legal superbike should be, and as far as we can tell it's as close as any company has come. In the past we have imagined the perfect literbike, with the telepathic handling of Aprilia's RSV4, the sophistication of Ducati's Panigale R, and the refinement of BMW's S1000RR. Yamaha has created that bike in the new R1.

## TECH SPEC

PRICE	\$16,490 (\$21,990 for the R1M)
ENGINE	998cc, liquid-cooled inline-four
TRANS/FINAL DRIVE	6-speed/chain
CLAIMED POWER	197.0 @ N/A rpm (European spec)
CLAIMED TORQUE	82.9 lb.-ft. @ 11,500 rpm (European spec)
FRAME	Aluminum twin-spar
FRONT SUSPENSION	KYB 43mm fork adjustable for spring preload, compression and rebound damping; 4.7-in. travel
REAR SUSPENSION	KYB shock adjustable for spring preload, compression and rebound damping; 4.7-in. travel
FRONT BRAKE	Dual Nissin four-piston calipers, 320mm discs with ABS
REAR BRAKE	Nissin one-piston caliper, 220mm disc with ABS
RAKE/TRAIL	24.0°/4.0 in.
SEAT HEIGHT	33.9 in.
WHEELBASE	55.3 in.
FUEL CAPACITY	4.5 gal.
CLAIMED WEIGHT	439 lb. wet (European spec)
AVAILABLE	Now
MORE INFO AT	<a href="http://yamahamotorsports.com">yamahamotorsports.com</a>

## VERDICT 1

The sharpest point of the cutting edge and quite possibly a new king in the superbike category.



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 “Raises the standards again.”

**WE SAY**  
 “Still the quintessential Italian superbike.”

# 2015 DUCATI 1299 PANIGALE S

Ducati Dials its Superbike Up From 11 to 12



Sometimes it feels like there is nothing on this earth that can make you feel more alive and yet closer to death than a motorcycle. And in all the realm of two-wheeled travel, the most exhilarating, fearsome, and proudest ride toward that feeling might be Ducati's 1299 Panigale. It's easy to look at the 1299 and think the sticker on the fairing is the biggest change, but Ducati has refined and updated most aspects of its flagship superbike to create a worthy replacement for the groundbreaking 1199.

A displacement bump from 1,198cc to 1,285 is achieved by boring out the already-huge 112mm cylinders to 116mm. The nose of the 1299 is wider,

the windscreen is 20mm taller, and the tailsection has been redesigned and fitted with a much thicker seat. And that's just the stuff you can see. Under the skin, the steering head angle has been steepened half a degree to an even 24 degrees, and the swingarm pivot has been lowered to match the lowest setting of the adjustable unit from last year's 1199 R.

The crown jewel of updates on the 1299 is the new-for-2015 IMU, standing for Inertial Measurement Unit. The IMU essentially measures how the bike is leaning, pitching, and accelerating and gives the data to the 1299's brain to process. Data regarding lean angle, for example, is processed by the ABS, wheelie control, and the Öhlins

suspension systems to change allowable rates of deceleration, acceleration, and fork/shock movement, respectively.

So, do all of these revised parts and added complexity draped over the 1299 actually make it a better bike? From a pure performance standpoint, the extra 87cc of bore creates more power, plain and simple. More importantly, Ducati claims that from 5,000 rpm to 8,000 rpm the new engine averages 15 percent more torque than the old powerplant. The result is that the 10 more horsepower—now a claimed total of 205 at 10,500 rpm and 106 pound-feet of torque—has a slightly more linear delivery, while maintaining the vicious top-end rush that defines the Superquadro V-twin. In





short, it's as blindingly fast as ever, if not more so.

Chassis updates check out too. The steeper steering head angle has kept the biggest Panigale agile and light to the touch without making it nervous. Flicking the 1299 from side to side it behaves impeccably, with precision and lots of grip. It feels stiff but appropriate for lapping tracks quickly and not uncomfortable in fast, sweeping corners. Lowering the swingarm pivot has mitigated some of the nasty, slip-then-grip, rear suspension pump that we experienced as previous Panigales searched for traction on corner exits. The 1299 squats slightly more when power is applied driving out of corners



**Semi-active Öhlins mechatronic suspension can be disabled, leaving the suspension in fixed settings that are adjustable manually. But, as Ducati CEO Claudio Domenicali said about event-based suspension: "It's like having an Öhlins guy in your backpack!"**

and feels more stable while doing it.

Moreover, certain aggravating things about the 1199 have been fixed, namely the rock-hard seat and horribly slippery cast footpegs. The seat will mostly contribute to making the 1299 a better streetbike and, in our opinion, detracts very little from the superbike feel on track. The Superleggera footrests fitted to the 1299 are such a huge and obvious improvement that it almost makes us tear up. To answer the previous question, yes, fundamentally the 1299 Panigale has been made better.

Whether you like it or not, it's the growing array of electronic adjustments and rider aids that keep the Panigale relevant. The aforementioned data-serving IMU is a key component, allowing the 1299 to understand (on a basic level) what situation it's in to help the rider navigate more smoothly. The Öhlins suspension has two channels, Dynamic and Fixed. Dynamic adjustability consists of five settings, front and rear, that can be adjusted independently: Softest, Softer, Default, Harder, and Hardest. Each setting provides a bracket of rider preference, inside which the suspension adjusts as the bike is ridden. Information

from the IMU is used to determine whether the motorcycle is cornering, braking, or accelerating and the bike reacts accordingly, stiffening the shock when driving out of a corner or stiffening the fork under braking, for example.

Similarly, ABS intervention is altered based on lean-angle data from the IMU. With more lean the 1299 "knows" that less brake can safely be applied, based on parameters preloaded into the motorcycle's system, and so decreases the chance of over braking when entering a corner. With perfect weather and ultra-sticky Pirelli Supercorsa SC2 tires mounted for our day at the racetrack, it was difficult, if not inadvisable, to experiment with lean-angle ABS technology.

Incidentally, the IMU does not influence traction-control involvement. The 1299's TC system has been configured for the new engine's power delivery, but the algorithms for intervention remain the same as the 1199 model.

Of the systems we were able to test thoroughly, some work better than others. DWC, or Ducati Wheelie Control, didn't win our hearts. The system is eight-way adjustable (nine if you count "off"), the higher the number the more intervention. Unfortunately it seemed to struggle with consistency. Level 8 clearly allowed less front-wheel lift than





**Above:** Finally, a comfortable seat!  
**Below:** The same large, full-color dash from the 1199 sits above an electronically controlled Öhlins steering damper.  
**Below left:** Massive M50 calipers squeeze 330mm discs. ABS is standard.

"Where some superbikes can be polite and gracious when asked, the Panigale is brash and boastful."



#### EVOLUTION

Ducati's ground-breaking 1199 Panigale gets semi-active suspension, more power, and a slightly better attitude.

#### RIVALS

Aprilia RSV4 RF, BMW S1000RR, Kawasaki ZX-10R, Yamaha R1M

setting 1, but we couldn't find a sweet spot that contained the bike's tendency to snap up wheelies while still allowing smooth acceleration. It can't be fully trusted as a performance feature, and experienced track riders will want to turn it off and modulate wheelies manually.

Conveniently, DWC can be adjusted on the fly via paddles mounted near the left-hand grip. Before embarking, the rider can select which system to adjust with the paddles: either DWC, traction control (also eight settings), or engine braking intensity (three settings). As handy as the paddles are, being able to fiddle with more than one setting at a time would be nice.

Other pieces need no further development. The Ducati Quick Shift (DQS) system's new auto-blip downshift function is brilliant. A gear- and rpm-specific map for the automatic throttle blips means the bike reacts differently for shifts in higher gears than lower ones, compensating accordingly for the change in ratio from gear to gear, providing the perfect downshift sans clutch lever. It's perfect for track use and spoiled us immediately.

At the end of the wheelie-rich, tire-melting day it's all of the small changes that make the 1299 more user-friendly and therefore a more realistic competitor in today's showroom power struggle. We can conclusively say that the 1299 is a more complete motorcycle than its predecessor, and we can also confirm it comes at a price. Specifically, a \$24,995 price. The base model, fit with a non-electronic Sachs shock and 50mm Marzocchi fork, as well as cast-aluminum (not forged) wheels, costs less at \$19,295.

It should be clear by now that Ducati isn't changing its tune. Yes, it's an expensive motorcycle, but it also delivers what Ducati customers have long appreciated—a bold statement. Where some superbikes can be polite and gracious when asked, the Panigale is brash and boastful. It always seems to be glaring around the garage, looking to pick a fight and assert dominance. And with the all-new Yamaha R1 on the horizon, as well as updated superbikes from Aprilia and BMW, the 1299 Panigale needs to be better than ever. We already can't wait to see which one comes out on top.

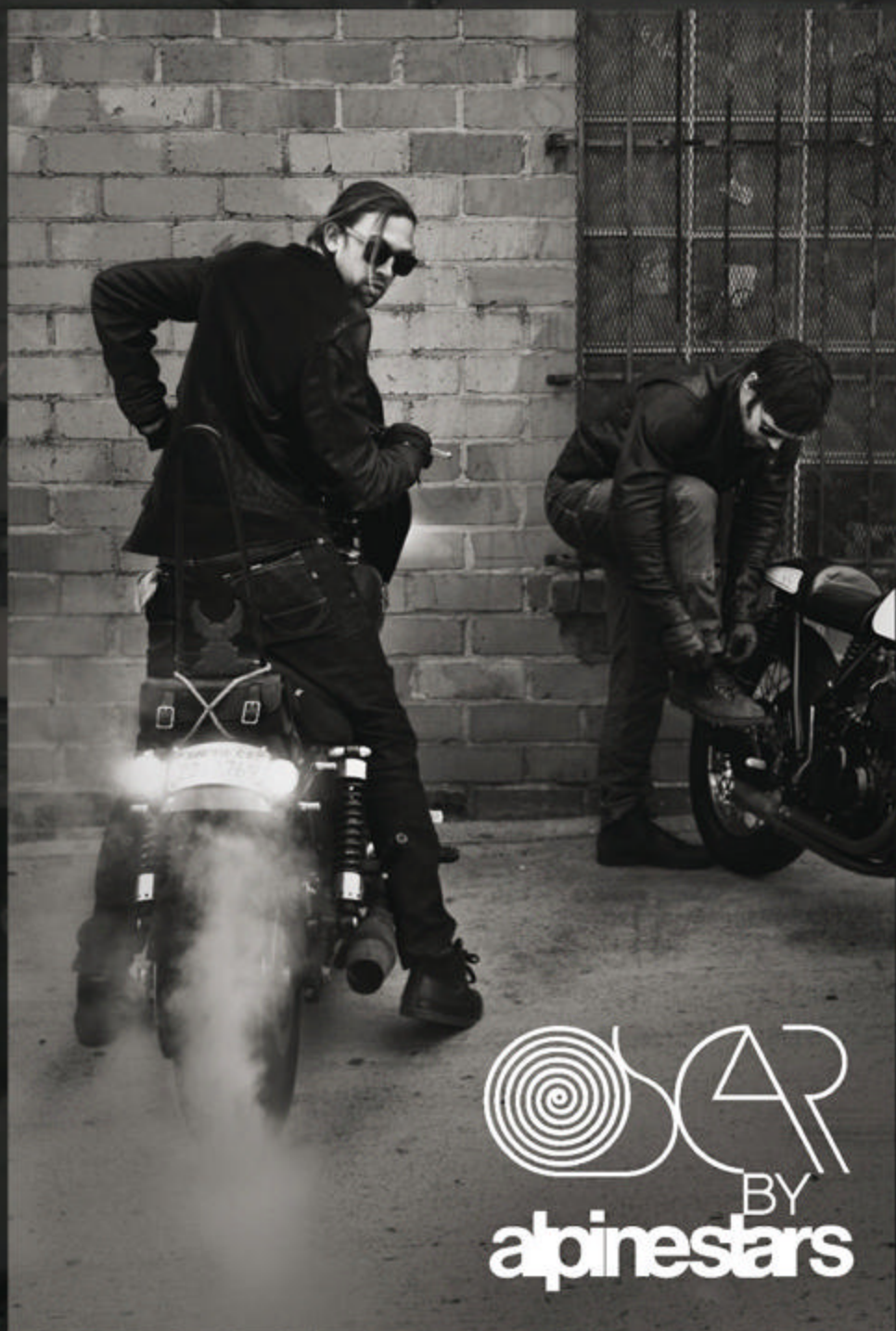
#### TECH SPEC

PRICE	\$24,995
ENGINE	1285cc, liquid-cooled 90° V-twin
TRANS/FINAL DRIVE	6-speed/chain
CLAIMED POWER	205.0 @ 10,500 rpm
CLAIMED TORQUE	106.7 lb.-ft. @ 8750 rpm
FRAME	Monocoque aluminum
FRONT SUSPENSION	Öhlins NIX30 43mm fork adjustable for spring preload with dynamic compression and rebound damping; 4.72-in. travel
REAR SUSPENSION	Öhlins TTX36 shock adjustable for spring preload with dynamic compression and rebound damping; 5.12-in. travel
FRONT BRAKE	Brembo M50 four-piston calipers, 330mm discs with ABS
REAR BRAKE	Brembo two-piston caliper, 245mm disc with ABS
RAKE/TRAIL	24.0°/3.78 in.
SEAT HEIGHT	32.7 in.
WHEELBASE	56.6 in.
FUEL CAPACITY	4.5 gal.
CLAIMED WEIGHT	420 lb. wet
AVAILABLE	April 2015
MORE INFO AT	<a href="http://ducatiusa.com">ducatiusa.com</a>

#### VERDICT

The latest in Italian superbike chic; fast, sexy, and lots of personality.





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# 2015 KTM 1290 SUPER ADVENTURE

More Than the Love Child of an 1190 Adventure and a 1290 Super Duke R

## THEY SAY

"Making the adventure last longer."

## WE SAY

"And you won't have to call your doctor after four hours."



Great rivalries are fine entertainment. Think Harley-Davidson and Indian. Triumph and BSA. Honda and Yamaha. Now imagine BMW and KTM. For the past couple of years, the not-so-little company from Mattighofen, Austria, has been bore sighting BMW with a raft of charismatic but still technically cutting-edge products. Once satisfied to dominate off-road racing and the dirt bike sales that go with it, KTM has outgrown those constraints. It wants BMW bloodied.

If you need proof, consider the 1290 Super Adventure. Based largely on the 1190 Adventure that debuted just two years ago, the 1290 refines its approach and takes dead aim at BMW's R1200GS Adventure. KTM started with the basic 1190 Adventure package. From the frame to the rear bodywork, it carries over many pieces from the 1190.

But much is new, including a much larger fairing and considerably taller

adjustable windscreen, intended to provide comprehensively more weather protection for the rider and passenger. The screen is so tall that it sits just below the eye level of most riders. It can be adjusted 80mm vertically, and for shorter riders, the mounting brackets can be reversed to drop the screen by about 30mm while still maintaining the full range of adjustment. Horizontal slots in the clear screen join with a carefully calibrated gap between the rear of the screen and the surrounding bodywork to reduce turbulence.

A wider upper fairing flares out to join the other big news for the 1290 Super Adventure: fuel, lots of it. Where the 1190 Adventure carries 6.3 gallons, the SA's vessel swells to carry 7.9.

From the mechanical to the electronic, then. With the 1290 Super Adventure, ride by wire returns, albeit with a number of new features. They include cruise control, activated by a trio of switches on the right

cluster. And while the 1290 retains the familiar four ride modes: Street, Sport, Rain, and Off-Road, there's a new trick: When the electronics sense the rider has made an especially aggressive downshift, they hold the throttle plates open very slightly to assist the slipper clutch in preventing wheel lockup. As before, changing ride modes also alters the bike's lean-angle-dependent traction control, with the most intervention in Rain, less in Street, even less in Sport, and permitting substantial wheelspin in Off-Road mode. Both the ride-mode-selected TC and the lean-angle-informed ABS can be switched off totally.

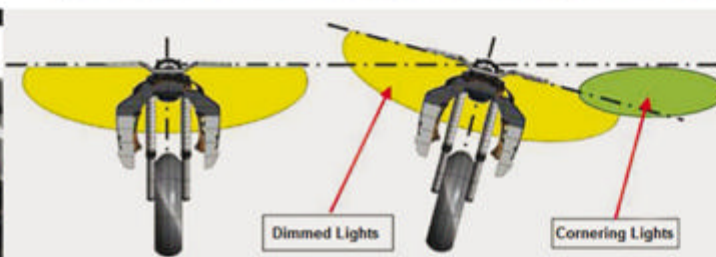
Wheelspin would be part of your daily experience without the electronics, too, thanks to the bigger engine in the Super Adventure. While the SA's version doesn't quite match the Super Duke's claimed 180 hp at the crank, it's close, with 160 hp at 8,750 rpm. Peak torque is 103 pound-feet



at 6,750 rpm, up from 92 pound-feet at 7,500 in the 1190 Adventure.

Numbers don't do the power delivery justice. There's simply relentless, delicious torque everywhere. But the electronics won't let you get in too deep. Power moderation with lean angle prevents a lot of slip before it happens, and a fast-acting traction-control system keeps the wheels in line even when you're super aggressive or the surface is unkind to adhesion.

Because the Super Adventure is KTM's most technologically advanced bike, it makes sense for it to carry the firm's first semi-active suspension. Built by WP, the system's responses are tuned by a separate menu offering Sport, Street, Comfort, and Off-Road. (Damping is set automatically by the system, but



**Clever cornering lights use a series of three LED segments that come on as the bike's lean angle increases, projecting a beam into the turn. No moving parts!**

spring preload is determined before the ride and set at one of four levels.) KTM's programming starts the damping settings according to a baseline that is skewed through four rider-choosable schemes. Sport is the firmest, followed by Street, then Comfort, then Off-Road. The system monitors both wheel travel—position in the stroke and calculated rate of change—and chassis accelerometers to maintain predetermined levels of chassis movement and wheel freedom.

When the system sees the bike heading out of range, it can very quickly alter the damping schemes softer or firmer to bring the chassis' responses back into the desired range. But there's more. Because the suspension computer is part of the bike's total CAN-Bus, it reads brake-line pressure and throttle position, among other things, and can anticipate fork dive under braking or rear-end squat under acceleration.

The KTM/WP semi-active suspension sounds far more complicated than it feels. In fact, compared to BMW's D-ESA on the R1200GS, the 1290's suspension options feel much more natural. It's firm, as you'd expect from KTM, but never

harsh, and the obvious alterations from the base map are progressive almost to the point of being subtle. Moreover, the difference in reactions from the firmest to the softest settings is smaller than you'd find on a BMW. Grab a handful of the Brembo radial-mount front brakes, which are superbike powerful, and the Super hunkers down for a rapid, straight stop with minimal fork dive and little sensation of the rear rising.

Unexpectedly, the Sport mode actually allows a little more dive under braking to preserve steering feel during trail-braking maneuvers; the Street mode attempts to keep the bike much more level and does. It also helps that KTM's combined ABS braking system applies a discernible but not excessive amount of rear brake when you squeeze just the fronts. (It is not linked rear to front.) You can choose to turn the ABS off completely, but there's also the Off-Road mode that allows increased front-wheel slip and total rear-wheel lockup.

On the generally smooth roads on the Grand Canary Island, where the press launch was held, the semi-active suspension worked very well. Ride

motions over small bumps were excellent, while overall chassis stability could hardly be questioned. That sort of chassis composure is good when you have thrust on call from any rpm beyond the starter motor's. Serious thrust.

Example? A section of road that could have been run in second and third gears could be comprehensively thrashed in third or fourth, allowing the 1290 engine to lug down to 2,000 rpm for the slower corners. From there, whack open the throttle and the bike pulls ahead, moderately at first but then with increasing urgency as the revs rise and the howl from the airbox stands the hair on your arms to attention. Because the lean-angle TC won't allow the engine to unleash full torque when you're heeled over, it becomes a matter of trail-braking to the apex, holding gentle bar pressure to maintain the line, and then rolling the throttle open. The Super Adventure surges ahead, tail wiggling seductively, TC light flashing on the tach face, and a huge smile on yours. Few bikes with this kind of effortless speed put the power down so easily. No doubt the extra heft over a Super Duke and the missing 20





**Above: Additional crank mass and revised cylinder heads differentiate the 1290 Super Adventure from the more powerful 1290 Super Duke R. Left: Hard luggage is standard in the US.**

hp make it seem less frantic, but it's still a huge thrill and totally in line with the bike's "luxury adventure" mandate.

Riders in warmer climates will appreciate the extensive efforts KTM's engineering staff took to reduce heat on the rider. You can see the new insulation on the rear header pipe, and it's effective. But so too are new ducts beneath the fuel tank that help direct hot radiator outflow away from the rider and even have separate paths to make sure the rider doesn't get a kneecap full of BTUs when the radiator fan comes on. Finally, a small panel just beneath the two-position-adjustable seat helps keep hot air convecting off the engine from singeing the rider's inner thighs.

From an ergonomic standpoint, the SA hits the bull's eye. It doesn't feel quite as massive as the GS Adventure, though the seat height is still an impressive 33.9 inches in the lower slot (34.5 inches in the higher position). You'll find ample legroom and a comfortable reach to the aluminum "fat" handlebar, which doesn't seem quite as mirror-bangingly wide as a GS's. A huge improvement over the old, the 1290's heated seat is a welcoming perch that suggests draining that big tank in one sitting should be easy work.

One cool feature saved for last, then. Where BMW uses a steerable reflector in the K1600 series to provide lighting that sees into corners, KTM has a simpler

**EVOLUTION**  
Developed from and largely based on the 1190 Adventure, the Super Adventure gets a version of the Super Duke's 1,301cc, 75-degree V-twin, advanced electronics, and semi-active suspension.

approach. Two LED arrays live just outboard of the radiator shroud. Based on info from the lean-angle sensor, the first set of three segments lights with a lean angle of 10 degrees, the next at 20 degrees, and all three at 30 degrees of lean. They are aimed higher and farther from the bike's long axis as they light up.

All this technology comes at a price, but not a particularly dear one. For the US market, the 1290 SA comes with plastic-frame/alloy-clad hard saddlebags with a combined capacity of 73 liters. It already has all the other features baked in, from the semi-active suspension to KTM's version of a hill-holder feature that keeps the brakes applied so you can drive off an incline without drama. All for \$20,499. A BMW R1200GS Adventure starts at \$18,495 but quickly gets above \$20K with the options needed to match the KTM. Then add luggage. Our best guess is that the KTM will be around \$4,000 less expensive when comparably equipped.

In the rivalry that has KTM trying to vanquish one of BMW's longest developed and inherently good bikes there is more than mere entertainment value. There are, and will be, some truly great motorcycles.

**RIVALS**  
Aprilia Caponord 1200, BMW R1200GS and R1200GS Adventure, Ducati Multistrada

## TECH SPEC

PRICE	\$20,499
ENGINE	1301cc, liquid-cooled 75° V-twin
TRANS/FINAL DRIVE	6-speed/chain
CLAIMED POWER	160.0 hp @ 8750 rpm
CLAIMED TORQUE	105 lb.-ft. 6750 rpm
FRAME	Tubular-steel trellis
FRONT SUSPENSION	WP 48mm fork adjustable for spring preload with dynamic compression and rebound damping; 7.9-in. travel
REAR SUSPENSION	WP shock adjustable for spring preload with dynamic compression and rebound damping; 7.9-in. travel
FRONT BRAKE	Brembo four-piston calipers, 320mm discs with ABS
REAR BRAKE	Brembo two-piston caliper, 267mm disc with ABS
RAKE/TRAIL	26.0°/4.7 in.
SEAT HEIGHT	33.9/34.5 in.
WHEELBASE	61.4 in.
FUEL CAPACITY	7.9 gal.
CLAIMED WEIGHT	549 lb. wet
AVAILABLE	Now
MORE INFO AT	<a href="http://ktm.com">ktm.com</a>

## VERDICT

An extremely capable technology leader from KTM that doesn't let the electrons totally rule the roost. Long range, rider amenities, and refinement all take a big step up.



# DATE NIGHT HAS JUST BEEN EXTENDED INDEFINITELY.



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# HARD PARTS

KTM didn't start totally from scratch with the 1290 Super Adventure, and that's a good thing. The 1190 Adventure it's based on is a fantastic platform, and the engine, a cousin to the raucous and ticket-worthy 1290 Super Duke R, is a peach.



## ENGINE

The RC8, 1190 Adventure, and 1290 Super Duke R share a basic engine platform that's substantially different from the long-running (though now dead) LC8 950/990 series (even though this new engine is also called an LC8).

To get to 1,301cc, the engine gains 3mm in bore and 2mm in stroke compared to the 1190. A new crankshaft has more mass than the 1190's or 1290 Super Duke R's to complement the Super Adventure's more touring-oriented role. A total of 2kg of additional flywheel mass was added through more material on the crank as well as a heavier alternator rotor. KTM's goal was to improve running smoothness and make the engine a bit less snappy.

And while the 1290 Super Adventure uses the same pistons and connecting rods as the 1190, changes to the cylinder head result in a higher compression ratio, now 13.1:1 from 12.5:1. Those heads carry over the 1190's twin spark plugs but get different (smaller) ports and milder cams in order to increase torque across the band at the expense of peak horsepower. Compared to the 1290 Super Duke R, the Super Adventure is down 20 hp at the peak (160 versus 180), but when you overlay the 1190 and 1290 SA traces, it's clear the new machine is stronger everywhere.



## ELECTRONICS

Bosch's ride-by-wire system (acting on Keihin throttle bodies) is at the center of the Super Adventure's extensive electronics package. With information on chassis attitude, including lean angle, the Bosch system informs the traction control as well as meters power based on the assumed ability of the rear Continental TrailAttack2 to handle it. Four ride modes determine maximum power, throttle response, and TC thresholds. Sport gives the most aggressive throttle response, the highest non-off-road TC thresholds, and maximum power. Street dials back the aggression a bit but not the peak power; TC allows a little less slip and moderates power with lean angle a bit more conservatively. Rain limits peak power to 100 hp and further increases TC intervention. Off-Road allows a two-to-one ratio of rear tire speed to front along with a 100-hp limit and very progressive throttle response. TC can be turned totally off. ABS can be turned off as well or placed in Off-Road mode, which allows you to lock the rear wheel but retain front ABS with an elevated threshold.

## SUSPENSION

For KTM's first semi-active suspension it turned to subsidiary and longtime partner WP. In concept, the WP-built system is something of a mixture of Ducati's Skyhook and BMW's Dynamic ESA. It's also a lot like the system on Aprilia's new Caponord. KTM uses a pair of accelerometers mounted on the chassis to read pitch changes and the frame's response to bumps. As well, KTM fits travel sensors so the system can read the actual position of the suspension. The rear employs a no-touch Hall-effect sensor on the swingarm that should be resistant to contamination, while the fork gets a novel magnetic sliding potentiometer inside the left leg. To keep the sensor clean, that leg carries no damping cartridge, just the single, heavy-duty spring and an electric preload adjuster. The other leg carries a conventional cartridge fitted with an electromagnetic valve that can change damping in 10 milliseconds. Like the familiar BMW designs, the WP shock has an electromagnetic valve to alter both rebound and compression damping, plus an electric motor preload adjuster.



## FOR YOUR COMFORT

Safety and convenience features abound. The Super Adventure has cruise control, hill control (which applies the brakes when the bike is stopped to keep it from rolling downhill), tire-pressure monitoring, standard heated grips and seats, and a clever auxiliary lighting system that sees into corners without complicated motors or movable headlight reflectors. A much larger fairing than found on the 1190 Adventure works with the larger fuel tank to provide considerably more weather protection for the pilot and passenger.





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**RIDING HAS EVOLVED.**



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F3**

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# 2015 STAR BOLT C-SPEC

What's  
This? A Café  
Cruiser?



## THEY SAY

"A modern V-twin cruiser with traditional café-racer character and style."

## WE SAY

"It's unconventional—but it works..."



Cast-aluminum clip-ons replace the other Bolts' tubular handlebar. The riding position is sporty but comfortable.



As the newest member of the Star Bolt family, the C-Spec blends café-racer character

with the Bolt's cruiser platform. Clip-on bars, mid-controls, piggyback-reservoir shocks, and Michelin Commander II tires give the C-Spec a nominal performance edge over its more laid-back siblings. And café-inspired styling cues, such as retro-style fork boots and removable passenger-seat cowl, are meant to woo young trendsetters and retro enthusiasts.

Remember, this is your basic Bolt underneath—a bike we happen to like a lot despite its modest performance. Still, it's better in C-Spec. In keeping with its sportier nature, the C-Spec has better ground clearance than the other two models, thanks to repositioned footpegs (5.9 inches back and 1.25 inches higher) and slightly longer suspension components (9mm longer fork legs and 6mm longer shocks). Although suspension travel is the same, the components increase the overall ride height and give the C-Spec a greater maximum bank angle—37 degrees versus 33 for the Bolt and Bolt R-Spec.

Like the other Bolt models, the C-Spec is designed to accommodate riders who could use a confidence boost. The 30.1-inch seat height, while taller than many cruisers, is more than 2 inches lower than the similarly styled Triumph Thruxton. Combined with the Bolt's compact chassis, the relatively low and narrow seat is designed to help riders reach the ground comfortably. Still, there is one challenge: The footpegs are half

**EVOLUTION**  
Based on the "urban performance bobber" Bolt, the C-Spec adds café-racer styling cues and a sportier riding position.

an inch wider than the pegs on the other Bolt models and may be right in the way of placing your feet on the ground.

Light steering and neutral handling make the bike fun on back roads and nimble in city traffic, somewhat belying its 542-pound claimed wet weight. The 61.8-inch wheelbase, shorter than many other cruisers—though 3.1 inches longer than a Thruxton's—also contributes to its agility. Tuck in behind the clip-ons and tip into a corner, and you almost feel like you're on a café bike, except that the C-Spec's low-rpm pulse and rumbling feel remind you that, despite the bike's sportier elements, you are riding a V-twin-powered cruiser.

Speaking of which, the fuel-injected 942cc V-twin has plenty of grunt off idle, with abundant usable power in the low and midrange. Although the motor's single-pin crankshaft contributes to a classic V-twin kind of vibration, it's overall pretty smooth.

Stopping power is solid, though the rear wheel is easy to lock up under moderately hard braking—ABS is not an option. While rear suspension travel is just 2.8 inches, it's reasonably compliant on uneven pavement. There's also the option of upgrading to a higher-performance rear shock set with 20 percent more travel (still a paltry 3.7 inches) and

adjustable rebound damping; stock only offer adjustable spring preload.

In keeping with the Star Motorcycles spirit of supporting customization, there are already 17 new accessories available for the C-Spec. But these are no doubt just a start. The C-Spec's details like the steel fenders and belt drive are designed to entice fabricators and aftermarketers to get inventive. And with a low starting price of just \$8,690, the C-Spec leaves plenty of money left over to get those creative juices flowing. Warm up your angle grinders, boys and girls!

**RIVALS**  
Moto Guzzi V7,  
Triumph Thruxton

## TECH SPEC

PRICE	\$8690
ENGINE	942cc, air-cooled 60° V-twin
TRANS/FINAL DRIVE	5-speed/belt
CLAIMED POWER	N/A
CLAIMED TORQUE	59.0 lb.-ft. @ 3000 rpm
FRAME	Tubular-steel double-cradle
FRONT SUSPENSION	KYB 41mm fork; 4.7-in. travel
REAR SUSPENSION	KYB shocks adjustable for spring preload; 2.8-in. travel
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REAR BRAKE	Tokico one-piston caliper, 298mm disc
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# ADV/LITE

LESS WEIGHT, LOWER COST.  
SAME GREAT VERSATILITY.

WORDS: Ari Henning / PHOTOS: Justin Kosman





When it comes to the now-nebulous “adventure bike” category, consumers have the ability to balance the scales of compromise just about any way they like. From globetrotting, knobby-tired tanks like BMW’s R1200GS Adventure to tire-smoking sportbikes on stilts like the Ducati Multistrada, there’s a long-legged, do-it-all ADV out there for nearly every kind of rider.

For those who want a mile-eater without the heft of a full sport-touring machine or the cost of an exotic European ADV, we have these three bikes. Kawasaki’s new Versys 1000, Suzuki’s revamped V-Strom 1000, and Yamaha’s new FJ-09 reside in a subcategory of the ADV segment that we’re calling “ADV Lite.” Lite because of these bikes’ lower price tags, smaller engines, and more reasonable curb weights.

In essence, these are slimmer, taller interpretations of full-faired sport-tourers with some ADV attributes to suit the times: hand guards, not to deflect branches but to block the wind; longer-travel suspension, not to handle rocks and logs but to tame scarred pavement and provide a commanding view; and minimalist (or at least smaller) fairings to offer a modicum of wind protection. These bikes have room for your stuff, the comfort to cover hundreds of miles at a time, and enough poise to properly assault corners along the way.

To see how well these ADV Lites work we stuffed the saddlebags (the Kawasaki’s factory equipped, the Suzuki’s and Yamaha’s installed as factory accessories) and set our emails to the “out of office” auto-responder for a 72-hour period. Over the next three days we traveled from Irvine, California, to Santa Cruz and back on a mix of freeway, flowing coastal and back roads, and forgotten, battered single-lane ranch roads.

In other words, we took these bikes on exactly the kind of adventure their manufacturers designed them for, demanding the same mixed-use versatility that’s made the ADV category such a success. By the end of our 1,000-plus-mile tour we came to know each bike and its strengths and weaknesses well. Here’s how they finished.





**The 'Strom's left case is a capacious 29 liters, but the muffler eats up 3 liters of capacity in the right case and leaves the interior oddly shaped. The dash is basic but effective; we're always a fan of an analog tachometer, and that power outlet is conveniently placed.**

## 3RD PLACE

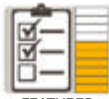
### SUZUKI V-STROM 1000 ABS



SPORT



TOURING



FEATURES

» From the loping demeanor of its 1,037cc engine (a relative of the TL1000's but extensively updated in 2014) to the relaxed way with which it bends into corners, the Suzuki is a mellow machine. A bigger, retuned V-twin and updated chassis and brakes bump the big 'Strom's performance to a new level, but the bike still favors general competency over excellence in any one area. "It's a great all-rounder," EIC Marc Cook said. "It does everything well but nothing spectacularly." The V-Strom is certainly a Swiss army knife of a bike, but none of the tools is particularly sharp.

The engine cranks out copious amounts of low-end thrust to the melodic whir of gear-driven cams, but the gearbox is clunky and off-idle fueling is fairly abrupt. With all that torque on tap (the peak of 67.3 pound-feet arrives at just 4,000 rpm) the resultant surge of power when cracking on the gas can be

disconcerting while banked over. That's a shame because the Suzuki is otherwise a very calm and composed corner carver; it doesn't offer the agility to flick from curve to curve and has slightly numb steering, probably due in part to the 19-inch front wheel. But it goes exactly where you point it and always feels composed.

The Suzuki's ergonomics felt awkward in this group due to its tall 7/8-inch bar and forward-set footpegs, but the bike is in no way uncomfortable. The Suzuki's seat scored high marks thanks to its good contours and just-right padding, and except for the muffler impeding on the right case's capacity, the luggage is excellent and fairly tidy. The only real complaint about the V-Strom (besides blandness) pertains to the turbulent air that swirls from the windscreen's edges. Every tester lamented the noise, not to mention the fatigue that accompanies having your helmet buffeted incessantly.

That helmet jostling might be remedied by buying the Adventure model, whose \$13,999 price includes a taller windscreen, the hard luggage shown here, plus hand guards, a centerstand, a bellypan, and accessory bars. We would have included that version for this test, but Suzuki didn't have one in the press fleet. The Adventure

is a good value compared to the \$12,699 base model, but compared to the Versys (\$1,200 less) and the FJ-09 (\$2,251 less as tested) it's expensive. And since the V-Strom is "stuck in the middle and in the shadow of both," as Associate Editor Zack Courts put it, the Suzuki finished third.

But if your intended path includes any dirt or even a sizable helping of bumpy back roads, the V-Strom should jump from the bottom of our list to the top of yours. With its 19-inch front wheel and longer-travel suspension, the Suzuki is the only bike here with any off-road DNA. Its tire sizes—same as the previous BMW GS—give you access to a much wider range of dirt-capable tires. And the V-Strom is easily the most flexible when it comes to variable riding surfaces, coping with small and large bumps alike thanks to more finely tuned (and fully adjustable) suspension that's a step above the Kawasaki's and the Yamaha's setups. Besides adding spring preload to the shock via the hydraulic adjuster, we didn't feel the need to make changes.

There are things we like about the 'Strom: The traction-control settings are saved when you remove the key—so TC stays off—and you can adjust the windscreen angle on the fly. The Suzuki also has the most sophisticated suspension and the best brakes by a fair margin. Bottom line, though: It's more expensive than the others but not necessarily better. That's a third-place finish to us.





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**The FJ's 22-liter cases are shaped right but will force you to pack light. The all-digital dash is a good one and thorough. It's best to reset the tripmeter when you fill up and monitor your mileage, however, because the non-linear gas gauge is just about useless.**

full lean. "I'm not sure the ideal setup is in there with the stock components," Marc said, "and while it's better than the FZ, the FJ doesn't have the overall refinement you get with the V-Strom."

That lack of refinement extends to several other aspects of the FJ, such as crummy aerodynamics, fussy windshield adjustment, and balky luggage latches. The factory side cases hug the FJ's flanks neatly, but they require a second key to open and the hasps were frustrating to operate. Lubricating the pivots and lock mechanism helped, and chamfering the edges of the stamped-steel locking tab would likely improve the action as well. As they come, however, the latches elicited complaints every time we used them. We definitely expect more from a \$974 luggage set.

The accessory heated grips, on the other hand, integrate seamlessly and crank out major heat. If they were included on the base model the FJ's value proposition would shoot sky-high, but even as it stands the bike is still a good deal. It's the most affordable and offers the liveliest character, least weight (at 497 pounds fully fueled), and the best performance of the bunch. As Zack put it, the FJ-09 is "the immature choice in a mature category." The Yamaha isn't the best mile-eater of the group and feels unfinished in some ways, but if you're drawn to sporty handling and love a powerful, lively engine, you'll learn to live with the FJ's shortcomings.

## 2ND PLACE

### YAMAHA FJ-09



SPORT



TOURING



FEATURES

» Because it's built on the bones of the rambunctious FZ-09, we knew one thing about the FJ-09 before we even threw a leg over it: We'd love the engine. Yamaha's 847cc triple is charismatic and punches way above its weight—our test bike belted out 104 hp and 60 pound-feet of torque at peak—and it's more enjoyable than before thanks to revised fueling that's done away with (most) of the FZ-09's annoying abruptness. In fact, the FJ has, overall, the best throttle response here.

Other aspects of the ADV-themed transformation include reworked suspension (with nearly double the baseline damping front and rear), a new fairing with an adjustable windscreen, a longer subframe, a new adjustable-height seat, LED headlights, centerstand, a 1.1-gallon larger fuel tank, traction control, ABS, and more. The factory saddlebags we added cost \$974 including mounts and key, and our bike came equipped with Yamaha's

excellent heated grips, a \$284 accessory. The bike's base price is just \$10,490, but all told this adventure-ready FJ rings in at \$11,748—still the least expensive bike here by more than \$1,000.

Overall the FJ-09 is more comfortable and better behaved than the FZ-09, but in this company it's still the rowdy bad boy. Compared to the recliner-esque V-Strom and the long Versys, the FJ-09 feels almost supermoto-like in its control arrangement, with a compact, upright riding position. And it feels wonderfully light, at a standstill and in motion. With the same geometry as the FZ-09 and an even wider handlebar, steering is immediate if not completely composed. "It's the sportbike of the group, no question," Zack said. "I like the directness and responsiveness," Marc added. "I just wish the chassis were a bit more settled."

Considering the FJ uses the same suspension components as the FZ-09 and still has very soft springs, it's no surprise this bike required the most fettling. We ended up maxing out the rear spring preload and adding a fair amount of damping to improve chassis support, but that left the bike feeling jittery over sharp-edged bumps, and everyone complained about a lack of feedback at



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## 1ST PLACE

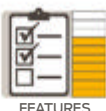
### KAWASAKI VERSYS 1000 LT



SPORT



TOURING



FEATURES

» This part of the ADV category is all about compromise, and when it comes down to it, Kawasaki's new Versys 1000 LT offers the best balance of comfort, performance, and price. As Zack put it, "It's calm but powerful, comfortable but sporty, and all at a cost that isn't outrageous."

Fit is a concern when your destination is on the other side of the state, and the Kawasaki suited us all the best. It's big and roomy, with well-positioned controls, a soft seat, and the best weather protection and aero here (though that's not saying much). The suspension is calibrated well for the mission, offering up good compliance and adequate support. "It's reasonably supple most of the time



**Symmetrical, 28-liter color-matched hard cases (made by Givi) are the benchmark in this group. The dash's big tachometer is a plus, but Kawasaki tries to cram too much info onto that small LCD screen. You can't display the time and the tripmeter at the same time.**

and keeps the big chassis on a fairly even keel," Marc said. We liked the suspension despite the fact that we had to resort to almost max damping adjustments (rebound only) to get the ride we wanted.

Compared to the Ninja 1000 on which it's based, the Versys has a slacker steering-head angle (by 2.5 degrees) and nearly an inch more suspension travel front and rear, which provides a cushier, more relaxed ride. The engine was updated with milder cams, a lower



compression ratio, revised transmission ratios (shorter in first and second and taller everywhere else), and more vibration-damping rubber engine mounts in place of the Ninja's rigid fittings.

The engine is a freight train, pulling hard off idle and offering up a buttery smooth and torque-rich midrange and an exciting top-end rush. It's not as thrilling as the FJ's engine but more dynamic than the V-Strom's and more powerful than both. Kawi's inline-four dishes up



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110.3 hp at 8,800 rpm and 70.6 pound-feet of torque at 7,000 rpm. Vibration creeps into the seat above 5,500 rpm and gets stronger as the revs rise, but with 5,000 rpm putting an indicated 80 mph on the speedo in sixth, there's rarely reason to rev the bike out. The only interruption in the Versys' seamless flow of power is at off/on and on/off throttle transitions, where there's a big hiccup. And we all noticed a throbbing sensation in the clutch lever during initial engagement.

In terms of handling, the Versys splits the difference between the laid-back V-Strom and the frenetic FJ. Steering is heavy at single-digit speeds but lightens appreciably once underway and feels light and accurate at higher speeds. The chassis felt the best in fast sweepers, but the bike handles tighter stuff too; you just have to respect its considerable heft. With the 5.5-gallon tank full, the Versys weighs 570 pounds. It's the heaviest rig here by more than 60 pounds, but it carries its weight well.

Offered as the Versys 1000 LT in the US, the Kawasaki comes with hand guards, a centerstand, three-level (plus off) TC, ABS, two ride modes, and luggage standard. Priced at \$12,799, the Versys slots in between the other two bikes while equaling both in most respects and even surpassing them in others. We're a fan of Kawasaki's simple electronics interface and easy wind-screen adjustment, and the luggage is the best, hands down. You can fit more in the bags *and* they're easier to use.

"Kawasaki has produced a real alternative to the Concours 14 as a sport-touring machine," Marc said of the Versys. Indeed, this bike certainly hews to the touring end of the spectrum but still maintains a high level of day-to-day practicality and enough sportiness to satisfy you on weekends. And compared to both the V-Strom and FJ-09, it's the best all-around performer. In a category that's slightly nebulous already, the Versys navigates the compromises best. That's a winning combination to us.



**The FJ-09's windscreen has height adjustments covering a 30mm range. This bike's small fairing and a narrow windscreen that tapers from top to bottom allow a fair amount of wind to reach the rider. Something about the complex angles of that front end creates light turbulence and a lot of wind noise. Note the tidy luggage.**



**The short, wide windscreen on the V-Strom is three-position angle adjustable (on the fly) and three-position height adjustable with tools. Weather protection is adequate, if the least of these three, but turbulence behind the screen is excessive. We ran the screen in the lowest, steepest position in an attempt to minimize the discomfort.**



**The Kawasaki's wider nose, more extensive fairing, and tall, well-shaped windscreen offer up the best weather protection, though turbulence is still an issue. The Kawasaki's windscreen is easily adjustable through a 75mm range via threaded knobs. Standard hand guards are simple and effective.**



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## KAWASAKI VERSYS 1000 LT



## SUZUKI V-STROM 1000 ABS



## YAMAHA FJ-09



The Versys ranked highest in terms of ergonomics with its spacious yet sporty layout and adequate weather protection. A long reach to high bars and forward-set footpegs make the V-Strom feel awkward. The FJ-09 sticks to the sporty side of things with its compact cockpit arrangement.

## OFF THE RECORD



ZACK COURTS  
ASSOCIATE EDITOR  
AGE: 31  
HEIGHT: 6'2"  
WEIGHT: 185 lb.  
INSEAM: 34 in.

This group of bikes is inherently limited by compromise. The FJ is a fun and lively adaptation of the naked FZ-09, but you'll only be surprised how low the price is until you feel the brakes and suspension. It's a surprisingly rowdy choice in this category, so if you want a sport-touring bike with a splash of immaturity, that's your choice. On the flipside is the white-muzzled black lab of motorcycles, the V-Strom, which loped along obeying commands all day without any spring in its step. Yes, it has arguably the best off-road capability, but for that money why not buy a BMW F800GS? The Suzuki is extremely competent and amazingly boring.

Kawasaki's Versys 1000 is the best balance. It's calm, poised, and all-day comfortable, plus it has the best saddlebags by far. It's also got lots of torque and plenty of sporting pedigree, with shared DNA from the Ninja 1000. Yeah, it's big and heavy, but for someone my size it fits just right and has the best aerodynamics of the group. I just wish it were available in green!



MARC COOK  
EDITOR IN CHIEF  
AGE: 51  
HEIGHT: 5'9"  
WEIGHT: 190 lb.  
INSEAM: 32 in.

On our three-day trip, I kept fussing with the FJ-09's suspension to find compliance over small bumps along with mid-stroke control. (By "mid-stroke" I mean that the bike felt under-damped in the middle of the suspension's travel, which made the chassis move too easily and feel unsettled.) I never found the sweet spot. We adjusted the Versys once or twice and basically left the V-Strom on the baseline settings. I know that the Suzuki can be made a little better with some fine-tuning, but it was already so far ahead of the others we just didn't bother.

Far worse a transgression is the FJ's aero coverage. As someone who owns the torso of a 5-foot-6 man (got it at Costco), I'm right in the war zone as the windblast, accelerated as it comes up the nose and past the over-styled demi windscreen, gets deposited straight onto my face shield. As such, this is one of the most aerodynamically boisterous motorcycles I've ridden in a long time. Not turbulent, just insanely loud. I'm going to experiment in the weeks ahead with the Yamaha accessory touring screen and might just see if trimming the stock shield can reduce the noise. (Look for an update on our website.) Why would I bother? Because otherwise this is my favorite of the three in this comparo.



ARI HENNING  
ROAD TEST EDITOR  
AGE: 30  
HEIGHT: 5'10"  
WEIGHT: 175 lb.  
INSEAM: 33 in.

I'm not sure if it's the price point we're working with here or the bikes' provenance, but the Kawasaki and Suzuki just don't do it for me. They're both adequate and entirely functional motorcycles, but they don't excite, and neither machine is without its flaws. Within the context of this test the Versys is objectively the best all-rounder, but it's too big and goofy-looking for me. I'd likely choose the Ninja 1000 instead. And while I respect the V-Strom for its stoic efficiency, it's too pricey and too boring to ever live in my garage.

When it comes down to it I'm the kind of guy who straps a tail pack and tank bag to a 600cc supersport and calls it a sport-tourer. I favor performance over comfort and always try to find the twistiest route from Point A to Point B. That being the case (and due to the fact that I love triples), I'd take the FJ. I'm as disappointed with the Yamaha's shortcomings as my fellow testers, but at least it gets my heart rate going. And, to me, motorcycling is as much about the excitement of operating the machine as it is about the pleasure of the journey.



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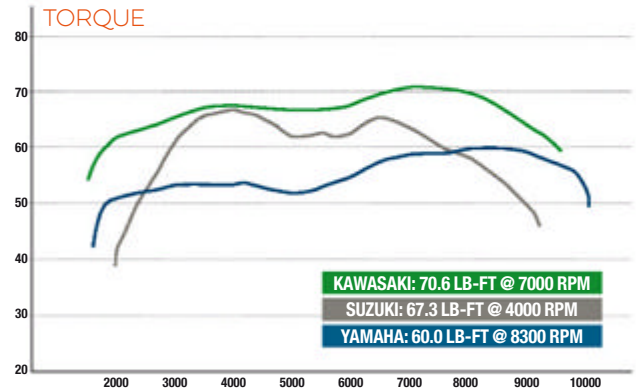
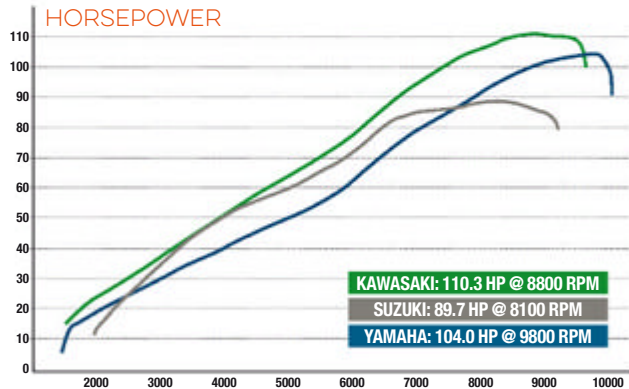
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1st shell for XS-S, 2nd for M-L and 3rd for XL-2XL.
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Kawasaki's 1,043cc inline-four charts the smoothest, tallest curves. That's 60 pound-feet of torque available off idle. The FJ-09 doesn't achieve that figure until 8,300 rpm, but its light weight and quick-revving engine make it feel plenty fast. The V-Strom's big V-twin offers a stout bottom end, but power trails off fast beyond 7,000 rpm.



## TECH SPEC

	KAWASAKI VERSYS 1000 LT	SUZUKI V-STROM 1000 ABS	YAMAHA FJ-09
PRICE	\$12,799	\$13,929 (as tested)	\$11,748 (as tested)
ENGINE	1043cc, liquid-cooled inline-four	1037cc, liquid-cooled 90° V-twin	847cc, liquid-cooled inline-triple
BORE X STROKE	77.0 x 56.0mm	100.0 x 66.0mm	78.0 x 59.1mm
COMPRESSION	10.3:1	11.3:1	11.5:1
VALVE TRAIN	DOHC, 16v	DOHC, 8v	DOHC, 12v
FUELING	EFI	EFI	EFI, ride by wire
CLUTCH	Wet, multi-plate slipper	Wet, multi-plate slipper	Wet, multi-plate
TRANS/FINAL DRIVE	6-speed/chain	6-speed/chain	6-speed/chain
FRAME	Aluminum twin-spar	Aluminum twin-spar	Aluminum twin-spar
FRONT SUSPENSION	KYB 43mm fork adjustable for spring preload and rebound damping; 5.9-in. travel	KYB 43mm fork adjustable for spring preload, compression and rebound damping; 6.3-in. travel	KYB 41mm fork adjustable for spring preload and rebound damping; 5.4-in. travel
REAR SUSPENSION	KYB shock adjustable for spring preload and rebound damping; 5.9-in. travel	KYB shock adjustable for spring preload, compression and rebound damping; 6.3-in. travel	KYB shock adjustable for spring preload and rebound damping; 5.1-in. travel
FRONT BRAKE	Tokico four-piston calipers, 310mm discs with ABS	Tokico four-piston calipers, 310mm discs with ABS	Advics four-piston calipers, 298mm discs with ABS
REAR BRAKE	Tokico one-piston caliper, 250mm disc with ABS	Tokico one-piston caliper, 260mm disc with ABS	Nissin one-piston caliper, 245mm disc with ABS
FRONT TIRE	120/70ZR-17 Bridgestone T30	110/80R-19 Bridgestone Battle Wing	120/70ZR-17 Dunlop Sportmax D222
REAR TIRE	180/55ZR-17 Bridgestone T30	150/70R-17 Bridgestone Battle Wing	180/55ZR-17 Dunlop Sportmax D222
RAKE/TRAIL	27.0°/4.0 in.	25.3°/4.3 in.	24.0°/3.9 in.
SEAT HEIGHT	33.1 in.	33.5 in.	33.3/33.9 in.
WHEELBASE	59.8 in.	61.2 in.	56.7 in.
MEASURED WEIGHT	570/537 lb. (tank full/empty)	529/497 lb. (tank full/empty)	497/468 lb. (tank full/empty)
FUEL CAPACITY	5.5 gal.	5.3 gal.	4.8 gal.
FUEL ECONOMY	42/37/40 mpg (high/low/average)	44/36/40 mpg (high/low/average)	46/36/39 mpg (high/low/average)
RANGE	220 mi. (including reserve)	212 mi. (including reserve)	187 mi. (including reserve)
CORRECTED ¼-MILE	11.69 sec. @ 116.5 mph	12.10 sec. @ 110.2 mph	11.60 sec. @ 112.5 mph
TOP-GEAR ROLL ON, 60-80 MPH	4.5 sec.	3.9 sec.	4.5 sec.
WARRANTY	24 mo., unlimited mi.	12 mo., unlimited mi.	12 mo., unlimited mi.
MORE INFO AT	<a href="http://kawasaki.com">kawasaki.com</a>	<a href="http://suzukicycles.com">suzukicycles.com</a>	<a href="http://yamahamotorsports.com">yamahamotorsports.com</a>





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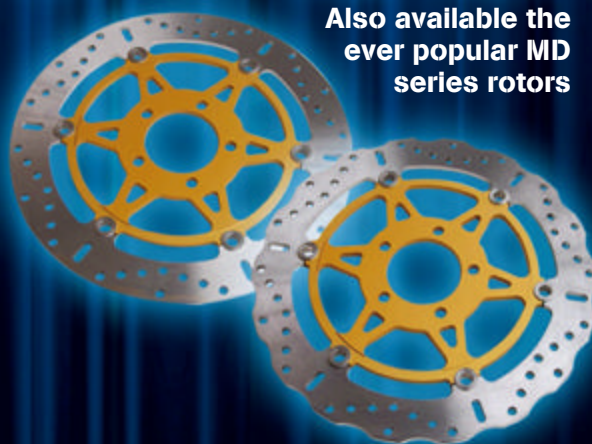
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# ROOTS

# BILLION-DOLLAR BABY

**Honda's ATC90—the  
First Modern ATV and  
the Bike that Built an  
Entire Industry**

**WORDS:** Mitch Boehm

**PHOTOS:** Scott Parmitter,  
Mike Palmgren, American Honda



Sometime in early 1968, Honda special-vehicle engineer Osamu “Tak” Takeuchi sat in a cluttered R&D shop in Japan and looked around. What he saw were all sorts of weird parts and funky, mostly finished prototypes: two-, four-wheeled machines, large-tired ones, tracked-wheeled ones, even one with skis.

In the center of the room sat something a bit more finished: a three-wheeled prototype with tiny wheels, huge pillow-like tires, and a fairly conventional seat/tank/bar layout. Tak nodded slightly as he spied it, for he knew that machine, which he and his team had built, was a reasonably good reply to the challenge

his bosses tasked him with a year before: to come up with something unique and interesting for American dealers to sell in the winter. The request was a shot in the dark, one with no direction whatsoever. The bosses simply wanted to support Honda dealers in winter, especially those in the northern tier, where off-season sales often slowed to a crawl.

Tak’s team spent a year researching, designing, building, and testing a wide range of prototypes for snow, sand, and mud, finally settling on this design a few months prior. During the final months came a breakthrough regarding wheel and tire design, and the bike’s functionality

suddenly clicked. The machine he was looking at was both fun and functional, two characteristics vitally important to any of Soichiro Honda’s products.

And so Tak now had some hope—hope that the design would be accepted and hope that it would have an impact on the US market. Given the monumental effect Tak’s little three-wheeler would have on the world’s powersports market in the years to come, he needn’t have worried. But, hey, hindsight is 20/20...

Prior to Tak’s creation, the All Terrain Vehicle category in the 1960s barely existed and was dominated by a handful of four- and six-wheel machines with





## What is it?



## THROWBACK

Honda's ad campaign in the early 1970s amounted to an educational effort. What the heck is the ATV and what can you do with it? Eventually, of course, consumers figured this out for themselves. The Amphicat (below left) provided its 22-inch, low-pressure, high-floatation tires, which made the whole concept work.



for the soft, slick, and otherwise tricky surfaces on which it would be ridden. The design was also unique enough to be patented in several ways, which would pay massive market-share and financial dividends later on.

Several versions were tried: one front wheel with two rears; two fronts and one in back; tandem wheels on dual axles in back, etc. Treaded motorcycle-type wheel and tire combinations were tried, but they chewed up soft terrain and didn't allow the chassis to maneuver as intended. The breakthrough happened when the team received from American Honda a set of low-pressure balloon tires from an Amphicat six-wheeler to evaluate. They reconfigured the prototype to accept these 22-inch diameter tires and wheels, and suddenly everything clicked. Traction and handling were better, and the footprint on soft terrain was minimal—just right and just what Tak had envisioned early on.

Functionality jumped yet another level when the team moved to Honda's 90cc OHC single from the 70cc unit they'd been testing. The bike now had the low-end and midrange it needed to handle softer, power-robbing surfaces. Another helpful change was a thumb-operated throttle, still in use today, which allows riders to maintain precise throttle control even when hanging off one side of the machine to help steer it. Testing showed the hardtail's tire-supplied suspension to be

adequate—at least for the relatively mellow use engineers and designers envisioned.

While functionality was the prime target, cost figured in as well. The simple design helped; Honda already had the engine, and the frame was a basic, stamped-steel assembly. There wasn't much R&D to complete or tooling to purchase.

By mid-'69, the US90—a name chosen to reflect the machine's primary outlet—was ready for production, and attention turned to informing the dealer body of the new concept. Honda knew it would likely be a hard sell, so it organized a weeklong dealer event at California's Pismo Beach featuring more than 100 pre-production units for dealers to ride and experience. They had a grand old time on the ocean dunes, but the big question remained: How would dealers gauge the US90's sales potential?

"Most had a hard time seeing the market," says a Honda associate who helped run the event, "unless, of course, they lived near sand dunes or a gravel pit." Even some inside Honda wondered. "As a motorcycle rider since the early 1950s," says longtime Honda president Tom Elliott, "I thought the US90 was a little weird and wondered if there was a market for it."

Still, bike sales were booming and dealers bought plenty. Some did well, others not so well, and it soon became obvious that geography was key; rural

tub chassis and turning accomplished by braking one set of wheels (one side) at a time. Companies such as Jiger, Mobility Unlimited, and Attex built balloon-tired models catering mostly to hunters and fisherman. Many could float, with some owners even fitting small outboard engines. Tak's concept thumbed its nose at these cumbersome, amphibious contraptions—then turned the entire concept of an all-terrain vehicle on that same nose.

Tak's team settled on the three-wheel concept relatively early, the triangular footprint offering the team what it felt would be the optimum combination of stability, traction, and maneuverability



# ROOTS



**Above:** A one-piece seat/fender assembly removes for access to the rear of the suspension-less trike. **Below:** The evergreen SOHC, air-cooled single hung from a steel frame in the ATC's belly. The location of the engine was patented for three-wheeler use.



“Farmers and ranchers discovered how useful ATCs really were, and that trend grew into the gigantic utility market we have today.”

dealers sold a lot of them, urban dealers less. Dealers promoted the \$595 US90 in unique ways too. Some floated them in pools in front of their stores to attract attention, while others took them to county fairs and allowed folks to have their hands and feet run over to show how soft and harmless the footprint was. Honda promoted heavily, too, mainly in print ads but also in movies, getting the machine into *Diamonds Are Forever*, a James Bond flick that debuted around that time.

By late 1970, the US90's debut year, the machine had officially become the ATC90, Honda successfully trademarking “All Terrain Cycle.” Press reaction was generally positive, and retail sales during the first few years averaged around 10,000, with roughly 150,000 being sold by 1978, the machine's final year of production. By then the line had expanded to include the ATC70, with the ATC110 taking over the 90's spot in the lineup. What's more, farmers and ranchers discovered how useful ATCs really were, and that trend grew into the gigantic utility market we have today.

“The ATC90 was a surprise to us,” says Yamaha product-planner Ed Burke. “We'd been researching alternative products at the time but hadn't moved on any. The off-road market was peaking at the time, and it seemed like it could

work.” Because of Honda's many patents, Yamaha couldn't jump into the market until 1980. Its initial entry, the two-stroke, 123cc Tri-Moto, was indeed a three-wheeler but had its engine positioned between the rear wheels. Eventually, Yamaha bit the bullet and paid Honda royalties until the patents expired.

But paying that price was worth it. “Once we got into [three-wheelers],” Burke remembers, “ATV sales became a significant part of our business. In the mid-'80s, [three-wheelers] literally took over a good portion of the off-road market. Bike sales declined, but three-wheeler sales grew. In many ways, ATVs have helped support the industry and keep dealers alive during significant downturns. You saw this then, and you see it today. That's really significant.”

But the three-wheeler story would not have a happy ending. Broken axles and poorly designed footpegs were problems early on, but issues of a far larger scope would eventually derail the ATC and three-wheeler train. The design's unusual handling, coupled with what must be called a healthy dose of rider irresponsibility (and arguably overzealousness by regulators and litigators), would spell the end. Honda's desire to reach out to non-motorcyclists

and utility consumers no doubt attracted many who felt motorcycles were dangerous, but that three-wheelers were somehow safer. Just because you couldn't fall over at a stop did not mean you couldn't crash them. Accidents increased and three-wheelers had already been convicted in the court of public opinion by the time the Consumer Product Safety Commission came on the scene.

Ultimately the CPSC forced the manufacturers to stop making and selling three-wheelers, a ban that took effect in 1987 and would last 10 years. Fortunately, manufacturers saw the writing on the wall early and began building four-wheel ATVs as early as 1982 (Suzuki was first, with Honda and Yamaha following in '84), a move that kept the ATV surge alive. Today, it's a multi-billion-dollar part of the powersports puzzle, with every Japanese manufacturer participating with machines that are clearly evolved from the original ATC, plus the proliferation of side-by-side (and larger) ATVs that resemble (and cost like) automobiles.

And it all goes back to the ATC90. From its inauspicious start as a seasonal gap-filler it got millions of people into motorcycling, many of whom would never have experienced the fun of our sport without it. It jumpstarted an entirely new industry, one that's sold more than 10 million units over the years. And it helped support our business and dealers at key moments when bike sales slacked off. All of this, one way or another, stemmed directly from Osamu Takeuchi's original three-wheel prototype.



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## Hiding in Suburban California, an Epic Collection of Historic Kawasaki Racebikes

WORDS: Ed Milich

PHOTOS: Rebecca Hinden



# THE GREEN HOUSE

An otherwise modest house on a nondescript suburban street in aptly named Pleasanton, California, is not where you would expect to find one of the largest assemblages of Kawasaki Grand Prix racing motorcycles in the world. But that's exactly where David and Lorraine Crussell keep their remarkable collection, with two dozen racebikes actually inside the house and even more in a shop out back.

Dave says his decorating strategy is simple: "I keep the 'pointy tank' Kawasakis in the entryway, the small Kaws in the dining room, and Denco bikes in the master bedroom. My water-cooled 750s, the 500 GP bikes, and the original H2Rs—five of just 35 ever

made—are all in the living room." Martha Stewart might not agree, but it looks great to us.

Why the fascination with smoky, old Kawasaki two-stroke "widowmakers" and all their racing variants? It goes way back, says Dave, who now works as an operating partner for a Bay-Area private-equity fund.

"I've owned Kawi triples since I was 17, but I sold all my bikes when I moved to the US from the UK 23 years ago," he recalls. "Then I purchased an H2 triple the day after I arrived in America. I'd flown into Wisconsin with a pregnant wife and one-year-old son. I read the local paper that night and saw a classified ad for an H2 for a ridiculously low price. I bought

it the next day. Unfortunately, I had no US motorcycle license. When I went to work on Monday for my orientation, I was relieved to meet Peter, a software engineer with a motorcycle endorsement. He rode it home for me the very next night!"

From those humble beginnings, the Crussell collection continued to grow steadily. Two of the bikes Crussell has had the longest are a pair of street-legal, Denco-powered H2s he has owned for more than two decades. Denco was a tuning firm based in Fremont, California, run by Dennis Dean and two-stroke tuning guru (and dragracing legend) Tony Nicosia. Denco made a series of performance packages for H2 models beginning with the Cobra 90, which consisted





vertical collection of Kawasaki GP bikes spanning from a 1968 A1R to a 1978 KR750. Crussell says his collection traces two distinct lines of Kawasaki racebike development, one starting with the '68 A1R (250cc two-stroke parallel twin), then continuing with a '69 A1RA, a '70 H1R (500cc two-stroke inline-triple), '71 H1RA, and '75 H1RW. The second line begins with the 1972 H2R, a descendant of the H1RA but with a 750cc two-stroke inline-triple. Crussell also owns '73 and '74 variants with minor frame and engine improvements, as well as the '75 KR750 that introduced water-cooling, then the final version, represented here by the '78 KR750. Together these machines document all of Kawasaki's chassis and engine racing development during that period, Crussell says.



**Above: Lorraine and David Crussell in their shop. Lorraine is an accomplished AHRMA racer too, winning multiple races over the past two seasons.**

of pipes and a carb kit, said to be good for 90 hp. Additional porting created the King Cobra 120; extensive top-end work made the Pro Cobra 138; and who knows what black magic made the Ultra Pro Cobra 147. Crussell now owns one of each of all the Denco bikes.

When Crussell started road racing in '98—he's a many-time American Historic Racing Motorcycle Association (AHRMA) champion who won five national championships in 2011 alone—of course it had to be on a Kawasaki triple, an original factory H2R that he still successfully competes with in AHRMA vintage events today.

"I simply love these big two-strokes," Crussell says. "The power surge. The smell of burning oil. The noise! And the H2R is the king—all go and no slow with 110 horsepower, 310 pounds, skinny tires, and horrible brakes!"

After many years of careful collecting, Crussell has assembled an essentially

The first of what Crussell calls his "collector" racebikes was an incomplete and mechanically needy H1R once owned and raced by famed tuner Al Gunter. After that, Crussell says, "things got complicated—and quickly."

One of the bikes Crussell is most proud of is the ex-Yvon Duhamel factory H2R, serial #1. Duhamel raced this bike in late '72 and all of the '73 season, as well as the British Match Races and Imola in '74. "If you see a picture of Duhamel on an H2R," Crussell says, "it's probably this bike." Crussell found it for sale in the UK by chance while surfing the web one Thanksgiving day.

"The description was brief and there

was only one small picture," Crussell remembers. "It was too late to call the guy, so I rang him the next morning. He verified the engine and frame number and answered a bunch of questions satisfactorily. Magnesium triple clamps and similar works parts indicated it was a special machine. I committed to buying it on the spot and sent him a deposit immediately then quickly arranged a flight to the UK. My parents still live there, so I rented a van and drove to Liverpool with my dad to pick it up. A day later the bike and I were headed back to the US."

Elapsed time for the whole deal was less than a week, Crussell says. "I've learned that you have to strike quickly when historically significant bikes appear on the market." At the same time, building a collection of this depth can be a long game. "Bikes like these take a long time to gather," he says. "It's not unusual for me to chase a target for five years. I'm





**Crussell's relationship with the Kawasaki brand isn't exclusive—he also collects and races Yamaha TZs like this TZ750 (above) modified specially for the Isle of Man Classic TT, where Crussell was named “Top Newcomer” in 2012.**



working on one now that I have 12 years into, and I still haven't bagged it.”

Crussell has other ex-Duhamel bikes too, including the #17 Kawasaki KR750 originally built in '76 and then upgraded to its present specifications in '78. This is the bike Duhamel rode at Mosport in the F750 class in '78 and '79 and is still equipped with magnesium carbs and all the other special parts that were only fitted to works bikes.

Another personal favorite bike is the ex-Rusty Bradley H1RA. Rusty Bradley was an up-and-coming amateur racer from Texas—some said maybe the most naturally talented American roadracer ever—who won many races on an H1R in '70, before he was killed in a crash in the first turn of the very first race at Daytona in 1971, riding a brand-new Kawasaki H1RA supplied by Boston Cycles. This is the very bike that Crussell now owns. “The bike was shown in the AMA Museum for many years,” Crussell says, “then was sold about 15 years ago at the annual motorcycle auction at Daytona during Bike Week. The buyer, a fellow

racer, is a good friend. I purchased the bike from him about 10 years ago, replaced some missing engine internals, and made it a runner again.”

Looking closely at the photos, you can see that Kawasakis are not Crussell's sole domain—he's also become quite an aficionado of Yamaha TZs too. “I had a water-cooled KR and Suzuki TR, too, and so I wanted a twin-shock TZ to complete the line-up,” Crussell explains. “I purchased my first TZ700 from the UK a little over 12 years ago. Three years ago, I got a call from a friend in Canada about another complete, late-model TZ750 for sale. I thought, ‘Why not, and let's give this one a go at the track.’”

After a complete strip-down and rebuild, Crussell went racing on it. “I'd raced against TZ750s several times on my H2R and had always blown them away—it turns out the riders were parading, not racing. It turns out it's quite significant, the jump in technology from my early '70s H2R to the later TZ750. After massively adjusting my riding style, I started to go even quicker on the TZ.”

“I simply love these big two-strokes. The power surge. The smell of burning oil. The noise.”

Crussell expects an even greater jump in performance from his latest project, a special TZ750 constructed specifically for the Isle of Man Classic TT. Standard TZs make 120 hp and handle marginally; Crussell's IOM TZ makes 150 hp and handles substantially better after upgrades like modern wheels, fork, and brakes. Crussell has been competing in the Classic TT since 2012, when he was awarded “Top Newcomer” status in the Superbike class riding his Kawasaki Z1. He rode the TZ there in 2013, making a 107.5 mph lap that was good enough for second in class and 16th overall in the Formula 1 category—despite almost running out of gas because the thirsty TZ sucked down nearly 3.5 gallons of gas per 37.7-mile lap!

Despite these adventures in TZ-dom, it's still the lime-green Kawis that take pride of place in Crussell's home and heart. “Our house cleaner is forbidden to touch anything with wheels,” Crussell says. “I dust them all myself!” And pity the interior decorator, when it's time for the remodel; what color best complements Kawasaki's team green?



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words: Ari Henning

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[bikemaster.com](http://bikemaster.com)

### 2 TRAIL TECH LED DRIVING LIGHTS

Light up the road with these universal LED driving lights, which crank out a combined claimed 2,500 lumens on high. Each unit contains a trio of LEDs in a machined-aluminum housing that's capped with a hardened-glass lens. Current draw is 30 watts on high and 15 watts on low. The \$320 kit includes two lights, a switch and wiring, and mounts to fit 7/8- or 1-inch handlebars or crashbars.

[trailtech.net](http://trailtech.net)

### 3 FLYING TIGER MOTORCYCLES 2-STROKE CANDLE

This candle emits a mellow light—and an authentic two-stroke-exhaust aroma! According to Eric Bess of Flying Tiger Motorcycles in St. Louis, Missouri, "The scent is as close as you can get and still have the candle burn correctly." Made in the USA using soy wax and real two-stroke oil, this 16-ounce \$20 candle is designed to capture the scent of the '70s. The container even resembles a vintage oil can.

[flyingtigermoto.com](http://flyingtigermoto.com)

### 4 ADMORE LIGHTING LED LIGHT BAR

Increase your conspicuity with this \$129 light bar from AdMore Lighting. It bolsters your taillight, brake light, and turn signals' effectiveness with an array of 78 super-bright LEDs. Functions include integrated progressive amber turn signals and a modulated brake light that's sure to get noticed. Mount it to your license plate or anywhere on the back of your bike with the included bracket.

[twistedthrottle.com](http://twistedthrottle.com)

### 5 FENIX UC35 FLASHLIGHT

Need lumens on the go? Fenix's UC35 LED flashlight pumps out a claimed 960 lumens in the brightest of its five digitally regulated intensities. At less than 6 inches long the UC35 is small enough to fit in your pocket, and its lithium-ion battery is rechargeable via an included USB cable. Waterproof, shock-proof, and blazingly bright, the \$90 UC35 is the superbike of flashlights.

[fenixoutfitters.com](http://fenixoutfitters.com)





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## CHROME INDUSTRIES MOTOR BARRAGE BACKPACK

➡ I absolutely love my Kreiga R25 backpack, using it for everything from quick shopping trips to a recent Baja excursion where it comfortably carried everything I needed for a four-day, 750-mile, all-off-road adventure. I love everything about the R25 except its tactical military styling, which looks fine with MX gear on Baja but utterly ridiculous, say, café racing on my vintage Moto Guzzi. And if one more person asks me why I'm wearing a parachute...

Call me a fashion victim, but I wanted a cargo-carrying solution that offered all the moto-specific functionality of the R25 but with a less-technical appearance. The Motor Barrage backpack from San Francisco's Chrome Industries is exactly what I was looking for.

With a heavy-duty ballistic-nylon exterior and a welded-waterproof inner liner made from 18-ounce, 600-denier tarpaulin—the same stuff the US military makes truck tarps from—this rolltop bag is Baja-tough and has proven utterly waterproof too. Expandable from 22 to 34 liters, it's big enough for overnighting, but load-stabilizing external compression straps cinch it down if you're only carrying a laptop.

An ergonomically engineered shoulder strap, bolstered by a sternum strap, evenly distributes heavy loads, and an EVA-foam back panel keeps you comfortable even after hours in the saddle. Durable metal cam-lock buckles instantly release shoulder strap tension—to easily slip the pack over a bulky, shoulder-armored motorcycle jacket, for example—then retighten just as quickly once the pack is on. Windproof “strap keepers” prevent annoying loose ends at 80 mph. This pack is clearly designed for those of us who ride.

My favorite moto-specific detail, however, is the fold-down tool carrier integrated into the front pocket—something essential when you commute on a 43-year-old Italian motorcycle! Designed to perform, built to last, *and* timelessly (under)styled, Chrome's Motor Barrage is my new favorite backpack.

—Aaron Frank



### CHROME INDUSTRIES MOTOR BARRAGE BACKPACK

**PRICE:** \$240

**CONTACT:** [chromeindustries.com](http://chromeindustries.com)

**VERDICT:** 7/10

It's not cheap and only comes in black, but no other backpack so successfully mixes expedition-grade functionality with urban style.

## LIFEPROOF NÜÜD IPHONE CASE

➡ Annoyingly, as cell phones have evolved they've become more delicate. Thankfully LifeProof offers phone cases sturdy enough to satisfy the needs of most motorcyclists.

LifeProof boasts that the nüüd case for the iPhone 5/5s is waterproof (to 6.6 feet) and shockproof (able to sustain a drop from above your head). The audio and charging ports seal with a threaded plug and a hinged clasp (that also locks the case shut) respectively, and a thin membrane covers the phone's home button.

The nüüd's marquee feature is its “screenless” design, whereby the screen is sealed along the edges. This means the touchscreen is unhindered by a protective coating but also exposed and completely dependent on the seals. Despite raised eyebrows from my peers, the nüüd has proven completely waterproof in my testing, which includes riding in the rain with the phone mounted to the handlebar via LifeProof's \$40 bar mount.

A couple of notes on functionality: The Touch ID function of my



### LIFEPROOF NÜÜD IPHONE CASE

**PRICE:** \$90 (case only)

**CONTACT:** [lifeproof.com](http://lifeproof.com)

**VERDICT:** 7/10

Serious weather/adventure protection for the cost of a month of smartphone service.

iPhone—allowing your phone to unlock by reading your fingerprint—works through the membrane, but it's shaky sometimes (and useless when wet, incidentally, but that's not the case's fault). The bar mount is a tidy design and worked well, except that a tapered handlebar can confuse the clamp for the mount. You'll want a couple of inches of free bar space, preferably with no taper.

Overall, the nüüd has been great. Both the case and the bar mount install quickly, without tools, and work as advertised. What it boils down to is this: This case is like knobby tires for your ADV bike. It's terrific in certain circumstances, but it's not necessarily the best day-to-day option. I would still recommend it for anyone who's serious about moto-adventures and/or weather protection, even if you only use it a few times a year for a couple of weeks at a time.

—Zack Courts





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MOTO GEAR

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JACKET!

## DRESS FOR ADVENTURE

Say what you will about the sudden popularity of so-called Adventure Tourers, but they've helped push a new kind of motorcycle gear to the fore. Adventure gear has to look tough, that much we know, but it's also edged into an area somewhere between textile sport gear and touring pieces. Waterproof is a given, but since the dream of ADV riding includes some off-road work, the gear needs to have the best armor and be built for durability. And because riding a 600-pound machine off road (at least a little bit) is a fair workout, this class of garment needs to breathe well. Gore-Tex and similar solutions are the norm here. If you haven't checked out the latest "adventure" gear just because you wouldn't be caught dead on a tall street-bike calling itself an off-roader, you could be missing out on some quality kit.

## MILES THIS MONTH

3 2 2 1

In the end-of-season transition, we're down to just four long-termers. More coming soon!



## DECODER RING


### CE APPROVED = Important Safety Standards

Not all "crash pads" are created equal. Some are more equal than others, including those marked CE (Conformité Européenne) approved. This is a set of agreed-upon standards for protective wear. Shoulder, elbow, and knee protection should conform to EN1621-1, while a good back protector should conform to EN1621-2. Better quality back protectors will be marked as Level 2 or B2, which indicates improved energy absorption and coverage area.





# LADIES, GET IN GEAR!

 What's the big deal when it comes to shopping for motorcycle gear? You visit your local dealership, try on something, pay for it, and then you're done. Unfortunately it isn't that easy for most women riders. The Motorcycle Industry Council says that among 27 million riders in the US, 6.7 million of us are women. However, only 12.5 percent of us are motorcycle owners, which means the vast majority are actually passengers.

As a result, we're often ignored. Having worked extensively in the women's motorcycle gear market for the past eight years, I've found that female passengers don't see themselves as riders but "just passengers." These words make my heart sink every time because she doesn't understand the consequences of falling off the motorcycle. Pavement doesn't discriminate! This perception is a challenge because if she's not interested in wearing gear and has zero experience shopping for it, how will she know what to look for? This is only one of the many challenges women face when shopping for the right gear.

**SIZING.** When I ask a man what size he wears, there's always an answer: "34/32 jeans" or "medium shirts." If I ask a woman what size she is, "I don't know" is a common reply. Many times, she doesn't know what her dress size or true measurements are. What makes this really important is the fact that motorcycle gear for women is not vanity sized the way jeans and T-shirts are. How can you possibly know your true size when one brand says you're "X" but another one says you're "Y"?

**VARIABILITY.** Further complicating this issue, motorcycle gear size charts are often inconsistent and can vary from one brand to the next. And we can't ignore the fact that we often have curves, so you might be a different size from your upper half to your lower half! There is simply no easy way to translate from casual clothes to safety gear.

**FIT.** We have also been trained to try on clothes in front of a mirror, not on a



motorcycle, so it's extremely difficult to immediately understand the way our gear should fit while seated on a motorcycle, not standing next to one. These sizing challenges are significant because it can impact the way our gear performs while riding and in the event of a crash. Your gear should fit better on the bike than off. Jacket sleeve length should be longer than usual, and may feel tight across the chest and loose across your shoulders, all so that it fits properly when you reach forward to the handlebars. Pants should run slightly long so that the knee armor slides perfectly into place when your feet are on the pegs. Gloves should have a pre-curved fit so they feel comfortable

when gripping the bar. Boots should limit your foot from excessive forward or backward movement. Finally, everything should fit snugly so that the armor stays in place should you fall off.

**FEATURES.** A lot of thought is put into how a piece of gear will make your ride as comfortable, convenient, and safe as possible. Jackets designed to work in more than one season should have removable liners and strategically placed ventilation for more airflow. Waterproof jackets should have covered or sealed zippers to keep you dry. Some pants have the ability to adjust your knee armor up or down depending on how tall you are, and



**If your gear doesn't fit well on the bike, you're losing out on functionality and safety.**



“We’ve been trained to try on clothes in front of a mirror, but your gear should fit better on the motorcycle than off.”

jackets may have straps on the sleeves to help keep armor in place. The more features like this a garment has, the more likely it is to be both comfortable and functional across many riding conditions.

**PROTECTION.** The two key criteria for protection are impact and abrasion resistance. Body armor is critical. If a garment doesn’t accommodate armor then it might not be very crashworthy. Some brands do not include armor but offer pockets so you can add your own, and third-party armor is available for these or as an upgrade to the basic armor included with some items. For abrasion resistance, the main issue is the material a garment is constructed from. Materials like leather and Cordura provide significantly more abrasion resistance than denim or other fabrics. Also consider the seams: Are they stitched with a material that will ensure that the garment won’t fall apart upon impact? The gear must be constructed in such a way that it protects you no matter what.

**FIT, THEN BUDGET.** It’s important to ignore price tags while you’re shopping at first. Let yourself enjoy, just in the beginning, the possibility that you can afford anything you want in the store. By ignoring price tags, you may miss out on something that fits you like a glove. Many times, a more expensive piece of gear may fit better than other less expensive options. Finding that fit in the beginning is the most difficult part. But once you figure out what brands/styles/fits work best, it’s a much easier process the next time you go shopping, and you’ll know exactly what to look for or what brands to seek out. If you find that you still can’t afford the high-priced item you’ve just fallen in love with, that company probably has more options in the catalog. Often, dealers can only afford to put out one or two options on their apparel floors, so it doesn’t hurt to ask to see what else they have to offer that fits in your budget.

**PATIENCE.** Now that you know what you should have, the question is: How do you get it? Normally, you shop at one of your local dealers. Their job is to provide knowledgeable staff and plenty of gear options in a brick-and-mortar or online environment (which can be 10 times more difficult). I’ve mostly worked in storefronts selling gear, and it’s so much easier when I am face to face with my customers. However, many shops lack a great selection of sizes, shapes, and features. The story I keep hearing over and over again from stores is, “But women just don’t come in here,” or, “I’ve tried and I can’t seem to sell anything.”

Selling women’s gear requires more than just stocking a huge selection; the salespeople should know the fit or sizing differences between one brand and the next. They also have to care about reaching women riders, educating them if necessary, and reaching out to the local riding community to find them.

This is where patience comes in. You, as the consumer, need to do your homework. My own site, *gearchic.com*, is dedicated to that, but it’s not the only resource. Share information with friends, read the online reviews closely, and keep looking until you’ve found the right, protective, functional gear for you.

—Joanne Donn



## WHAT’S WRONG WITH FORM OVER FUNCTION?

When I made the choice to ride 11 years ago, I immediately accepted the risk of injury. I have some respect for those who know exactly what riding without gear means yet do it anyway. But when you don’t educate yourself about those risks, and you make choices without all the information, you’re backing yourself into a corner.

Some of you are thinking: It doesn’t matter what I wear. But those are the rare accidents. What if you’re riding down the street at 15 mph while a car merges into you because the driver didn’t check his blind spot? Depending on what you’re wearing it can mean the difference between getting up and walking away with a few bruises or being taken away in an ambulance because you’re unable to walk.

I would certainly love to wear a casual, lightweight leather jacket when riding. Without protective features the jacket would be softer, lighter, and look better on me than most motorcycle jackets. My cute, stylish wedge boots would be less bulky and far more comfortable to walk around in than motorcycle boots. And my favorite jeans, which I can practically sleep in because they’re so comfortable, would be preferable to riding pants.

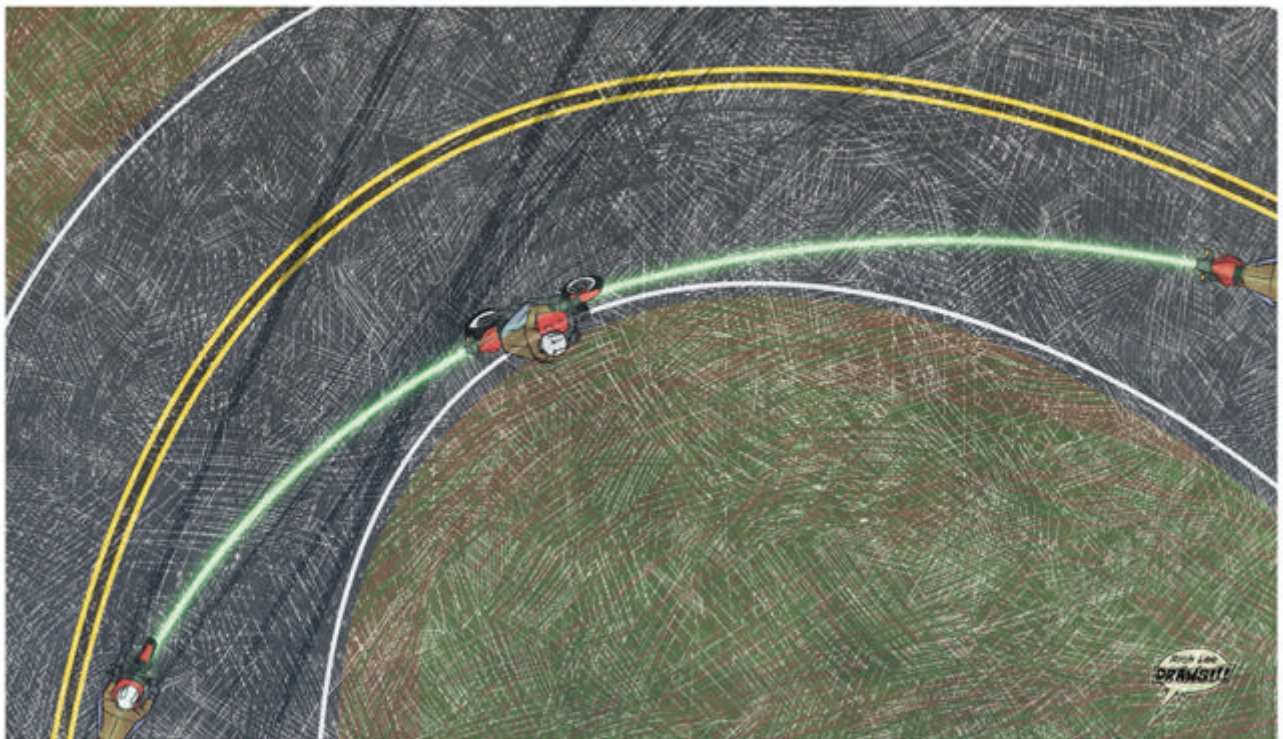
However, my body means a lot to me, and I try to give it as much sensible protection as I can. Even the best motorcycle gear is often a compromise, but casual clothes offer absolutely nothing in terms of safety or protection. Strong seams, reinforcement along impact points, and body armor are nowhere to be found.

Once you make the choice to wear safety gear, it’s important to accept that almost everything with real protection still won’t feel or look like casual clothes. Many brands have attempted to create stylish, protective gear, and some have succeeded. Yet I still find that many of these options must sacrifice some protection in order to achieve the ultimate goal of being fashionable. When your safety as a rider takes a backseat to how our gear looks, you’ll very likely regret that choice down the road.

—Joanne Donn

Find gear reviews, in-depth fit strategies, and personalized recommendations at Donn’s site, *gearchic.com*.





## CORNERING LINES

Unlike cars and trucks, motorcycles occupy a narrow portion of a typical road, giving us the choice to ride in the left, center, or right part of the lane. This freedom offers some significant benefits, especially when cornering.

Last month, I talked about ways to identify the character of an approaching corner to help you determine a safe entry speed. This information also allows you to select the best “cornering line” or path through a corner.

The basic cornering line is the “outside-inside-outside” (O-I-O) path that starts at the outside edge of the lane, continues to the inside (apex), and finishes near the outside at the corner exit. Roadracers use versions of this basic line mainly because it is the fastest way around the racetrack. But cornering lines benefit both racers and street riders as a way to maximize traction and increase control.

Riding around corners without venturing far from the middle of the lane is fine when the road is predictable and speeds are low, but more precise lines become essential as the pace increases and corners become more challenging.

The most obvious benefit of the basic O-I-O line is that it straightens the corner radius, which means you use less lean

angle for a given speed. I hear what you’re saying: You love leaning your motorcycle, so why would you want to straighten the curve? As much fun as it is to lean deep into corners, the more you lean the more traction and cornering clearance you use, leaving you with less grip and clearance to make corrections or avoid midcorner hazards.

Entering a corner from the outside sets you up to ride a straighter path, and it also provides a better view into the corner so you can judge the radius and determine whether there is anything of concern around the bend. The wider you enter and the longer you can delay turn-in, the better angle of view you will have.

Delaying turn-in also sets you up for the indispensable delayed-apex line, where you wait until you are around the corner to apex. The beauty of the delayed apex is that it gets your bike pointed safely around the corner and not at the outside edge of the road. In contrast, an early apex forces you to carry more lean angle and increases the risk of you running out of pavement, ground clearance, or talent. This is especially true when dealing with the dreaded decreasing-radius turn. To execute a delayed apex you need to turn “late and quick,” staying wide for what may seem

like an eternity before countersteering sharply toward the late apex.

The basic O-I-O line is great for stand-alone corners, but you’ll need to get creative when dealing with a series of curves. For example, if the next corner in a series changes direction, you’ll need to use an outside-inside-*inside* line. That way, you remain tight to the inside all the way around the corner where it becomes the outside entrance to the next curve.

Stringing together a series of corners requires precise turn-in timing combined with the correct amount of countersteering force. Turning too late and with not enough handlebar pressure can cause you to miss the apex, forcing you to ride around in the middle or outside of the lane and limiting your options for managing unexpected trouble.

Cornering lines can also be used to corner faster, but it’s a whole lot smarter to use this technique as a way to increase your margin for error if a corner tosses you a surprise.

As if this list of benefits isn’t enough, using cornering lines also makes riding super satisfying, as you interact more intimately with your bike and road. You’ll discover that carving perfect lines through a series of corners amps the fun factor way, way up. —Ken Condon



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## VALVE ADJUSTMENT INTERVALS

**Q** I have two bikes, a Triumph Bonneville and a Honda CB1100. The Triumph's shop manual says to check the valve clearances every 12,000 miles, but the Honda's says every 8,000. They both use shims to set the clearance, and they're both low-revving air-cooled engines. So why the different adjustment intervals? A friend with a Honda Gold Wing says his valves don't need to be checked until 32,000 miles. Is that because it's water-cooled? I've read on Internet forums about riders who have never checked the valves, and their bikes run fine for thousands of miles. Is it really necessary to check them at all?

Joe Robie / Watsonville, CA

**A** Whether or not a bike is liquid-cooled has less to do with valve-check intervals than things like cam profile and lobe hardness, the kind of followers or buckets, valve weights, average rpm, and a host of other factors. Also, intended use, which is why Honda specifically built the Gold Wing for longer valve-check intervals, appreciating that owners tend to put a lot of miles on them.

Manufacturers test to determine valve-train wear and set inspection intervals to protect from a worst-case situation. Because they're conservative,

the vast majority of the time, inspections at the first couple of intervals reveal very little wear. Some engines wear tight—that is, the valve clearances decrease because the valve settles into the head faster than the material between the cam lobe and the follower wears. Some go the other way. The only way you know for sure which way your engine is going is to check it. It's easy to get complacent when the first or second intervals reveal valves to be right on spec.

Ignore the forum chatter. The loud-mouth who says you never have to



**check your valves won't pay for repairs** should something happen and won't stand behind you when the dealer denies warranty coverage because you haven't followed the manufacturer's recommended maintenance schedule. Also, should you decide to sell your bike, you'll have to find a similarly maintenance-averse buyer to accept the fact that you haven't checked the valves. The odds are very slight that you'll ever have valve train-related problems, but knowledge is far more useful than hearsay.

—Jerry Smith


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WORDS:  
Jeff Maddox

# ARE YOU A GOOD CANDIDATE FOR AN EXTENDED WARRANTY?



We take it for granted that today's motorcycles are as reliable as the sun and as durable as a cast-iron skillet. But the truth is they're becoming even more sophisticated and complicated machines. It's no longer just a matter of two wheels, an engine with a carburetor, a steel tank, maybe a couple of brakes (at least devices that *looked* like brakes), and a place to sit.

Now you have electronics this, sensors that, and lots of systems that hide behind microprocessors and black boxes. So let's be honest: If you grew up knowing how to set points and can field-strip an Amal carburetor in your sleep, today's bikes might seem a bit daunting—not so much harder to work on but a lot tougher to diagnose. Moreover, some of today's bikes need special tools and diagnostic equipment that's simply too expensive for a typical rider to possess. When the bike dies for no apparent reason, it's probably not a

matter of lifting the tank and fixing it with a screwdriver.

Assuming you're not going to be committing the bulk of the maintenance on your bike, consider these options:

**1/ Take advantage of extended warranty protection to cover you from anything mechanical or electrical that might happen to your bike during ownership.** This is not a warranty in the conventional sense but an extended-service contract that acts as an extension to the factory warranty and usually offers other benefits such as roadside assistance, towing reimbursement, tire and wheel protection, and the ability to transfer this warranty when you sell your bike. Please read the fine print and ask a lot of questions if the warranty being offered is not OEM specific. For example, does it promise original-equipment parts in the event of a failure?

**2/ Prepaid maintenance works to save you money in the sense that you can lock in today's labor rate by paying in advance for your first three (or more) service appointments.** Again, if you've had your motorcycle in the shop for a 5,000-mile service, you know the cost of even an oil change can take your breath away. If you already know you're going to pay for it down the road, why not take advantage of today's labor rate? With some prepaid maintenance plans you may be paying the labor rate of the shop you purchase your bike from, and it's contracted no matter which dealership does the work for you. This is important, as not all dealerships charge the same labor rate per hour, and that hourly rate can vary as much as \$30 to \$40.

*Jeff Maddox is the sales manager for a multiline dealership in the Midwest. Questions for him? Email us at [mcmall@bonniercorp.com](mailto:mcmall@bonniercorp.com).*

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## WASH YOUR TEXTILE RIDING GEAR

 Gear gets dirty—bugs and grime gunk up the exterior while sweat funks up the interior. A moist cloth is great for spot cleaning (and the only safe way to clean leather), but when it's time for a deep cleaning, it's time for immersion in soap and water. We use a jacket in this example, but the process is the same for pants and other textile gear as well.



**1** Remove the armor from the shoulders, elbows, and back of your jacket, and unzip and remove any interior liners. Mark similar-looking pads so they go back where they came from. Check your pockets for earplugs and other items, and then zip them closed, leaving the main zipper open.



**2** If you live in a buggy region or do a lot of off-road riding, your gear may need a little extra attention before the big wash. Pre-treat especially dirty areas with a brush and diluted detergent.



**3** Hand-washing your gear is the safest option, but a front-loading washing machine (on gentle) will work. Why such care for an ostensibly tough piece of apparel? While the jacket's chassis can take a thrashing, the fabric's exterior coatings and interior laminations can be fairly delicate. Most laundromats have industrial-size front-loading washers that are perfect for the job.



**4** Over time the water-repellant coating that's applied to the exterior of many textile jackets will wear off. Adding a waterproofing solution such as Nikwax to the wash will restore your jacket's water-beading ability. Refer to the instructions on the bottle.



**5** Air-dry your apparel on a hanger or lay it flat on a dry towel. Never put motorcycle gear in the dryer unless the manufacturer explicitly allows it. (See number three's note regarding coatings.) Pointing a fan at your jacket will accelerate the drying process.



**6** Once your gear is dry, slip the armor back into place, reinstall any interior liners, and revel in the brightened colors and neutral aroma of your freshly washed apparel.



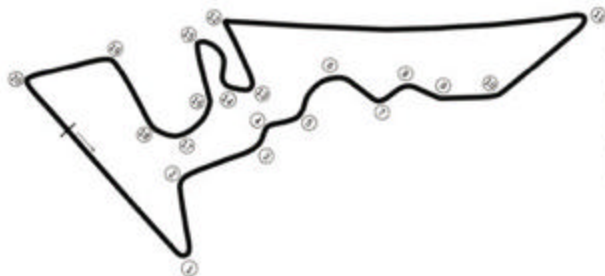
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## Indian Scout

**WRIST:** Brian Hatano  
**MSRP (2015):** \$11,299  
**MILES:** 4,216  
**MPG:** 43  
**MODS:** Slip-on mufflers



UPDATE  
05

That saying “because stock sucks” just doesn’t apply to the Indian Scout—for me at least—and the proof is right there on the odometer. More than 4,000 miles into “ownership” of the Scout and here I am, just now slipping into a new pair of mufflers.

When it comes to a friendly, easy-to-ride cruiser, the Scout designers did their homework. Aside from the short windshield that I installed last month, I’ve been rolling bone stock and not really feeling the need to change anything to improve the ride. Sure, there’s room for improvement, but I love it as is! And about that windshield... Yes, it’s a proper fit, it does an adequate job of deflecting wind, and doesn’t take away from the styling too much, but I had to ask myself: Would I part with \$450 if I were a Scout owner? My answer was no for a couple reasons. Not only is it pricey, but it also doesn’t quite fit my plan for how I want the bike to look. Your answer may vary, especially if your pockets are a little deeper and you spend a lot of time on the highway. For now, I’ve shelved the screen. So on to the exhaust mod.

I’d say there are quite a few Sportys, Dynas, and Softails that don’t even make it out of the dealer showroom without a slip-on exhaust installed. I think Scout owners might not be so quick to alter what is essentially a classy-looking OEM

system that delivers a pleasant, albeit sedate, sound.

If you have not yet heard the new Scout engine, it has a subtle but very pleasing gear whine that rises in pitch when you rev it, and the sound out of the stock cans is distinctly late-model Indian V-twin: All meat, no “potatoes.” I think the Scout owner who will fork out 800 bills for the Indian Stage 1 Straights is someone who 1) wants to hear a throatier rumble; 2) insists on keeping everything 100-percent Indian; 3) really loves the look of the factory over-and-under shotgun pipes; and 4) can’t wait for more budget-friendly alternatives from the aftermarket.

The Indian Stage 1 Straights are SAE J2825-compliant and meet EPA and CARB emissions limits in all 50 states (and, yes, I know the website says 49). Such compliance means that, out of the box, these pipes will not be obnoxiously loud, and with a factory look and added Indian logo on the top can, it’ll pass the occasional visual inspection by “the man.”

Indian states that the Straights will allow the 69ci engine to “breathe more freely and unleash additional power; especially enhanced midrange torque and crisp throttle response.” Each set of slip-ons comes with a Calibration Card with a registration number for EFI calibration by



The visual improvement that the Indian Straights slip-ons provide over the stock cans is subtle but one that Scout owners will appreciate. The top muffler is engraved with the Indian Motorcycle logo, the stock black end caps are gone, and the Straights cans are slimmer while still retaining the classic dual-shotgun look that complements the bike design.





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## DOIN' TIME MC GARAGE



Without the ECU reflash (a "Calibration Card" is included with the purchase of the Straights slip-ons), performance between stock pipes and Straights slip-ons was unchanged. We'll recalibrate the Scout and re-dyno next month to see what improvement, if any, the new exhaust delivers.

an authorized Indian Motorcycle dealer.

I didn't go that route yet because the registration number is a one-time deal, and I might be adding a performance air filter in the future that and could affect the calibration. (I'm told that K&N should have a part number available by the time this issue drops in March).

But I did put the Scout up on our in-house Dynojet 250i for some numbers. With OEM exhaust, the Scout was good for 88 hp and 64.8 pound-feet of torque. The Straights actually cost 1.6 hp at the peak and gained a fraction in torque. Basically a wash, but remember this is without the recalibration. The Scout was due to go back to Indian's fleet center for some other updates at our deadline, and should come back with the performance tune installed. We'll lash it to the dyno and try again.

Even if the results aren't there, at least the installation is do-it-yourself simple. Indian suggests allotting the project 40 minutes start to finish. I say that includes a 10-minute break. The Straights are a tad slimmer than the stockers, which is definitely a plus. No more black end caps, another plus. And the Indian logo on the top tube makes the slip-ons look more factory than the originals. On the shop scale there was less than a pound of difference between the two sets. And the sound? Well, I find myself revving the engine for no reason but to hear it. Yeah, that's just the cruiser in me I guess, until the novelty wears off.

So what's next for the Scout? Well, I still have a couple unopened boxes from Indian that contain more bits from the exhaustive accessories catalog. I plan to try them out before stepping a little farther out of the box. Stock may not suck, but I'd still rather be modded!



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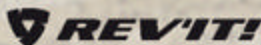
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## Harley-Davidson Road Glide Special

WRIST: Andy Cherney

MSRP (2015): \$23,699

MILES: 7,235

MPG: 41

MODS: Fancy new dipstick,  
H-D bike wash kit



UPDATE  
04

Okay, let's get this out in the open. A couple of months ago, I mentioned having maintenance done on my Road Glide Special, including getting the radiator and coolant checked. Naturally, the email lit up with Harley owners reminding me that the Road Glide, though technically a Project Rushmore bike, is still very much air-cooled. In my defense, I was writing a story on the CVO Road Glide Ultra, which is "Twin Cooled," as Harley calls it. Dumb mistake.

Now, about my *air-cooled* Road Glide. I've taken to wearing lighter-weight gloves to better feel the warmth emanating from the Streamliner grips, and that's upped the comfort quotient for my paws, at least somewhat. Problem is the lighter mitts don't protect my digits as much from wind-blast at higher speeds, so it's not an ideal compromise. The bike has a scheduled visit to the H-D Fleet Center later this month, where techs have promised to diagnose the low grip-heat issue. And maybe bolt on radiators just to mess with me.

Another compromise worth noting is the Zeppelin saddle's material durability. The seat cover's textured fabric portion is now sports a couple of fresh snags in the pilot's section. Whether it's fallen victim to errant boot heels or prickly keychains I can't be entirely sure, but I'd guess this kind of wear probably wouldn't have happened as easily with a leather or vinyl saddle. Coincidentally, Harley has just listed a vinyl-topped version of the Road Zeppelin (\$740) in its online catalog, so there are other options.

What else... Oh, yeah, winter. Oregon's soggiest season can be brutal on bikes,

and it's not because of rock salt on the roads (the state generally uses less corrosive calcium magnesium acetate and/or sand) but the effect of mud and muck that's found on pretty much every street this time of year. The wet grit kicks up onto fenders, wheels, engine parts...you name it. And it's a royal pain to clean off.

Frustrated with those coin-operated washes, I've resorted to ordering the Complete Bike Wash Kit from Harley (available at Harley dealers; \$50), hoping to remove some of the caked-on gunk that accumulates even after just one ride. The kit comes with a concentrated cleaning solution, bug remover, wash mitt, Bug Eater Sponge, detailing cloth, and a drying towel.

After several hours with a bucket and hose and lots of elbow grease, the bike is looking noticeably shinier, with chrome now restored to gleaming status and the crusty undercarriage reacquiring a good part of its formerly glossy self. The Bug Remover seems to have melted fly carcasses especially well, or at least way better than the standard-issue bike wash I'd been using, and now most of the crust is gone. Next I'll probably order the Harley Detail and Protect kit, to better seal off the Glide's painted surfaces from environmental gremlins. As soon as it stops raining, anyway.

Meanwhile, I've also added an Oil Level and Temperature dipstick with Lighted LCD Readout (\$150) from the H-D Parts & Accessories Catalog, mostly because the stock black 'stick wasn't the easiest thing in the world to make out during roadside oil checks, and I wanted a more reliable gauge of the Road Glide's oil consumption on longer trips. This item's pretty pricey, but so far the gauge has given me far more convenient and accurate measurements without much fuss. Maybe next on the list is a coolant-temp gauge, huh?



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## KTM 1290 Super Duke R

**WRIST:** Zack Courts  
**MSRP (2014):** \$16,999  
**MILES:** 12,710  
**MPG:** 36  
**MODS:** Dealer service, TomTom GPS



UPDATE  
10

ZACK COURTS, BRIAN MACLEAN

The 1290 went back to the mother ship for its second scheduled service, admittedly a little bit late, and I learned a few interesting things. Included in the scheduled maintenance chart (I found it at [ktm.com](http://ktm.com)) is an estimate for how long each service should take a KTM dealer to complete—handy for getting a quote and checking your dealer's work. The estimate for my KTM's 15,000-kilometer service was 116 minutes, and my local dealer quoted me \$350. In the end they reported the work took 160 minutes, but happily the final bill was \$363.58; as far as I'm concerned 14 bucks is in the ballpark.

KTM's 15,000-kilometer service is extensive, basically involving a front-to-back check of the bike's systems, from wheel and swingarm bearings to cooling and drainage hoses to brake pads and fuel pressure. In doing so the dealer alerted me to a recall for battery cables, some of which were manufactured incorrectly by the supplier and installed on some 2014 1290 Super Duke models. Problems with the cables manifest as "bad contact or poor connection" with power supply and ground connections. Although my 1290 never displayed any electrical issues, it's worth checking with your dealer if you own a 2014 Super Duke.

Lastly, I questioned the dealer about any issues with 1290 Super Dukes having slop or play in the rear hub, after reading complaints/concerns online. They reported no such problems with any 1290's that have come through the shop—and my bike

isn't exhibiting the malady yet—so as far as I'm concerned it's still a mystery.

Next on the agenda was a GPS install. Specifically, TomTom's new Rider, a motorcycle-specific system that looked like it would fit in the 1290's minimal cockpit. Installation is uncomplicated; the biggest challenge was finding a source of power. A TomTom-provided cable offers plenty of length, and pre-stripped ends make adding connectors easy, but finding power was a little tricky.

Boss-man Cook directed me to the helpful pages of [superduke.net](http://superduke.net), which in this case had concise and specific instructions for where to find KTM's accessory outlets for power, nestled under a subframe spar, beneath the seat and behind the battery. In fine KTM form, accessory power is labeled and fitted with standard female spade terminals for convenience.

**How convenient is that? KTM is kind enough to incorporate two power taps into the Duke's wiring harness. Other KTMs (dating all the way back to the 950s) offer these hook ups as well, though locations may differ depending on the model.**



After confirming that ACC2 (accessory 2) offers switched power—as opposed to ACC1, which draws from the battery even with the key off—I plugged in the TomTom's power supply. (Note: You'll need your own male spade terminals to connect to the bike, and test the leads to make sure you know which is power and which is ground. Also, leave the seat off until the unit is mounted to the bar, so the slack in the wire can live safely under the seat.)

TomTom provides mounting systems from RAM Mounts, one that pinches the bar and one designed to mount to the clutch reservoir. Neither looked as clean as the Handlebar Clamp Base with M8 Screws ([rammount.com](http://rammount.com); \$12/set) that take the place of a handlebar pinch bolt and allow the mount to hover just over the steering stem. Taking care not to pinch the wire providing power and allowing the bar to swing freely lock to lock, I placed the TomTom Rider in a convenient spot in the 1290's cockpit and dived into the setup menus. Plan on a few minutes here, too.

I'm surprised at how bulky it is, but overall the unit's fit and finish is impressive. The screen is bright (but darkens automatically at night) and the touchscreen works with gloves on, both key features. Next up will be testing TomTom's sense of direction—it has a "winding routes" function I'm looking forward to trying. TomTom has an updated Rider system on the horizon, so I'll get familiar with this one in order to test the latest and greatest in a couple of months.



## Product Comparo: Bohn Armor Pants vs Kevlar Jeans

ActionStations Boss Paul English talks about the differences in lower body protection options.

**Kevlar reinforced jeans are popular with riders of all kinds of bikes.**

**Draggin Jeans were among the first on the market, and there are now many similar versions available.**

**Many riders are interested in how these compare to the Bohn Pants.**



**Q: Paul, please explain the differences between Kevlar riding Jeans and the Bohn Pants.**

**PE:** In short kevlar has great abrasion resistance and is excellent for gravel rash when you're sliding down the road. With the Bohn System we're focusing more on Impact Protection - the vulnerable 'corners' you land on and damage - knees, hips, and elbows and shoulders with the shirts. An unprotected impact in these places can put you in the ER and off work. And hurts!

**Q: But won't your armor grind through in a wreck?**

**PE:** Actually in over 15 years, we've never seen our armor significantly damaged at all! This is because in a crash, we tend to bounce and slide, scrubbing the speed off.

**Q: The Bohn System has to be worn under jeans as an extra layer, isn't that hot and a hassle?**

**PE:** Positioning armor snugly against your body is the best way of providing comfortable and discrete protection so that it's in the right place if you have a fall. Yes, it's definitely an extra step compared to jeans - but on the other hand you can then wear your own jeans, or whatever pants you choose. It gives you a lot more options.

**Q: But isn't it hot?**

**PE:** The only time you notice the Bohn Pants being hot is in the heat of the summer when you're a standstill, say sitting on your bike at a light.

At that time of year everything's hot! Otherwise they breathe really well in all seasons; and we do have options of a mesh shell material and also a winter thermal solution.

**Q: What about putting armor into kevlar jeans?**

**PE:** Some companies do have this option, which on first impressions is a good idea. But what actually happens is the armor 'flops' around the outside of your leg as it's attached to the jeans - so you can imagine that it won't be in the right place if you actually do hit the ground.

**Q: So do I need to upsize your jeans for the Bohn Pants?**

**PE:** Surprisingly most people find that their existing regular-fit, or relaxed jeans fit perfectly over the Adventure Pants - that's because the armor mainly fits where your jeans are loose.

**Q: Don't the Bohn Pants make your jeans look bulky?**

**PE:** No one can see you have anything but your jeans on!

**Q: And you make armored shirts too?**

**PE:** We think of the pants and shirts as 'A System' that protects you without having to wear full armored gear - specially in the heat.

**Q: So what's the best choice?**

**PE:** As a lifelong rider myself - I love to have choices in bikes, accessories and gear. Many riders are happy with kevlar jeans, and most are very well made.

We're proud of the Bohn Adventure Pants and the amazing customer reports we get, but everyone has different priorities.

**My suggestion is to give us a try - we've a great Can't-Lose 90 Day Trial Offer! And they're made in the USA too.**



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## OUTSIDE VIEW

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But now we wear this Bohn gear underneath. Yes it's underneath! You can't see it, and we can't feel it.

I just feel happier when I have some protection these days, though I'm sure we're not going to have a spill.

Check it out - read their testimonials - that's what I did.

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I crashed at 70mph last weekend and I was barely injured. Your knee pads worked perfectly to cushion the impact. I have some swelling and road rash but not a single fracture. Thank you most sincerely.

They are very comfortable, I forget I even have them on, fit great, and it's great knowing I have the protection under my jeans. Thanks so much.

...your product has made a believer out of me and the select few who saw my kamikaze flight through the air. I can only imagine the numerous injuries that luckily avoided by wearing the armor.

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## UNDERNEATH



I am happy to report my bohn armored pants helped save my butt in a crash this past week-end. Thanks, great product consider this a testimonial to their effectiveness

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...the road littered with gravel...I walked away without a scratch, the bike was not so lucky. I just wanted to say thank you and let you know that your product saved me a lot of pain

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### Suzuki

#### V-Strom 1000 ABS

WRIST: Marc Cook

MSRP (2014): \$12,699

MILES: 9,303

MPG: 40

MODS: New luggage, windscreen



UPDATE  
05

© MARC COOK

Finally I got out of the office and free of the shop to put the V-Strom to a decent touring test. The distance wasn't huge—400 miles each way—but the situation was what you'd call no-frills transportation: Ride to the Santa Cruz area from my office at about midday, work there for a day and a half, and then head home Friday evening. If anything determines how good a motorcycle is as a traveling mount, this kind of gotta-get-there deal will do it.

Naturally, I used the trip to try some new accessories. First was Suzuki's own touring windscreen (from Suzuki dealers; \$235), an option for the base V-Strom and standard on the Adventure model. I can't say I'm in love with the looks, but the screen, taller and wider than the stocker, worked amazingly well. In the lowest of three positions—the V-Strom allows you to bolt the screen into one of three vertically, plus the mounts pivot to three different angles—I could easily see over it. Best of all, weather protection improves as turbulence decreases. My shoulders and arms are still out in the breeze, but my core is well protected with this screen.

SHAD's new SH36 side cases (*shadusa.com*; \$660 with mounts) are available with V-Strom 1000 mounts, so I packed them for this trip. In most ways, I really like the bags. They're roomy, at 36 liters each, and sized so a full-face modular helmet fits with ease; the Suzuki pieces are 26 and 29 liters each. The fit and finish of the SHAD cases are terrific, considering the parts cost less than half of the factory options. Cinch straps inside the bags hold cargo in place and a handy floor extends into the opening

half of the clamshell so your stuff doesn't immediately hit the road when you open the bag. The locks are sturdy, and—*behold!*—the bags can be left unlocked and the key removed.

My sole complaint is with the mounts. Because these are universal bags, they are not built to snuggle up to the V-Strom's tailsection. There's space between the bags and the bike, so the bags stick out a bit. And along with the fact that the luggage is a bit wide anyway, you get an installed width of 40.9 inches. Suzuki's own bags are 34.3 inches wide. Not a problem most places in the world, but real mirror-banging trouble here in lane-splitting-allowed California.

Because I can't stop tinkering, I used the smallest spacers between the SHAD upper mounts and the Suzuki's subframe that I could, even electing to run without the plastic trim piece in an effort to move the bags toward the bike's centerline. Then I added 1-inch shims to the forward mounts, which moved them in a little. For all that effort, they measure 40.2 inches across.

Once I got clear of traffic and forgot about the V-Strom's bustle butt, it was a fantastic trip. The ability to gobble miles in a low-key, unassuming manner is the Suzuki's most endearing trait. Good range from a 5.3-gallon tank and an average of 40 mpg (down a little with California's winter gas), a nearly perfect seat, supple

suspension, and low vibration all make for a bike you can run from fuel stop to fuel stop without much pain. I returned home near midnight on Friday, none the worse for wear.

SHAD's SH36 saddlebags are much larger than Suzuki's own pieces. Pretty wide, though.





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## 1985–1992 BMW K100RS

**⚙️** In the late 1970s, BMW's trademark Boxer was on the ropes. In addition to tightening emissions regulations threatening the old slugger, a horsepower free-for-all had just broken out among the Japanese, and without a four-cylinder contender BMW was relegated to the undercard. The Bavarian propellerheads had to come up with something newer, cleaner, and faster. The result, an inline, water-cooled four, hit flat-twin traditionalists like a haymaker between the eyes and launched BMW into a new era of multi-cylinder powerplants. One of the first fours from BMW, the K100RS, remains one of the company's sleekest and sexiest bikes ever.

Not content with merely breaking the Boxer mold with a four, BMW laid the 987cc engine on its side, with the head on the left and the crankcase on the right, positioned longitudinally in the frame for less power loss from crankshaft to driveshaft. The layout kept the weight low—though many riders still complained the bike felt top-heavy—and simplified maintenance. Bosch LE-Jetronic fuel injection replaced the carburetors that had been standard equipment on Boxers. BMW boffins preferred two valves per cylinder rather than four, and yet the brick engine put out 90 hp, transferred to the road through the Compact Drive System that debuted on the K series.

Initial impressions of the bike were favorable if not wildly enthusiastic. The riding public took to the new design slowly but eventually warmed to it, though the subsequent introduction of a three-cylinder engine in the K75 threw a spotlight on the K100 series' vibration. The K100 engine might not have run hot, but the same couldn't be said for some riders whose thighs were roasted by the blazing heat pouring off the engine. This issue was resolved eventually, and the K100RS took its place as BMW's sport-touring flagship, gaining a reputation as a solid performer and an able accomplice with a dash of style, a sporty seating position, and optional hard bags.

Those in the know say if you're looking for a used K100RS you should go after one that's been ridden regularly and comes with complete service records; seldom-used models with spotty paperwork seem to develop problems that all come out when the bike returns to service. There's a weep hole under the front of the engine; if oil or coolant appears to be leaking, the oil pump and/or water pump are suspect. Another weep hole in the back of the engine case warns of a bad rear main seal or forward transmission seal.

Lateral movement in the rear wheel means possible final drive problems. Check to be sure the drivetrain splines have been lubed regularly. Front wheel bearings and steering head bearings should also

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**1987–1994 HONDA HURRICANE 1000**  
At the beginning of the jellybean-styling craze came Honda with the fully faired (and we mean *fully*) CB1000F, called the Hurricane for the first few years. A powerful, smooth, comfortable sportbike, it replaced the short-lived VF1000F V-4 and was the top rung until the CBR900RR appeared in 1992. We'd call the Hurricane a sport-tourer today.



**1988–1995 KAWASAKI ZX-10/ZX-11**  
Even back in the late 1980s Kawasaki was pushing its performance heritage and dropping the Z-1 name wherever it could. Good thing the ZX-10 was up to the association. Using an engine based on the Ninja 900, the ZX-10 (and by '91 the ZX-11) was prodigiously fast, surprisingly comfortable, and even remarkably fleet of foot.



**1984–1996 YAMAHA FJ1100/1200**  
As its competitors brought liquid-cooled engines to the category, Yamaha soldiered on with the FJ1100/1200 series, whose air-cooled, inline-four carried on predecessor XS-11's incredible torque output and turbine-like smoothness. What started as Yamaha's top-line liter-class sportbike became a sporty ST by the time the FZR1000 debuted in 1987.

be inspected for clicks or notchiness. Cracked exhaust pipes can make the bike run hot. High mileage shouldn't stop you from considering well-cared-for examples. Used prices are on the low side even for good ones, and even though some Boxer purists still turn up their noses at its brick engine, the K100RS is a proven sport-tourer that threatens to emerge as a bargain classic in coming years.

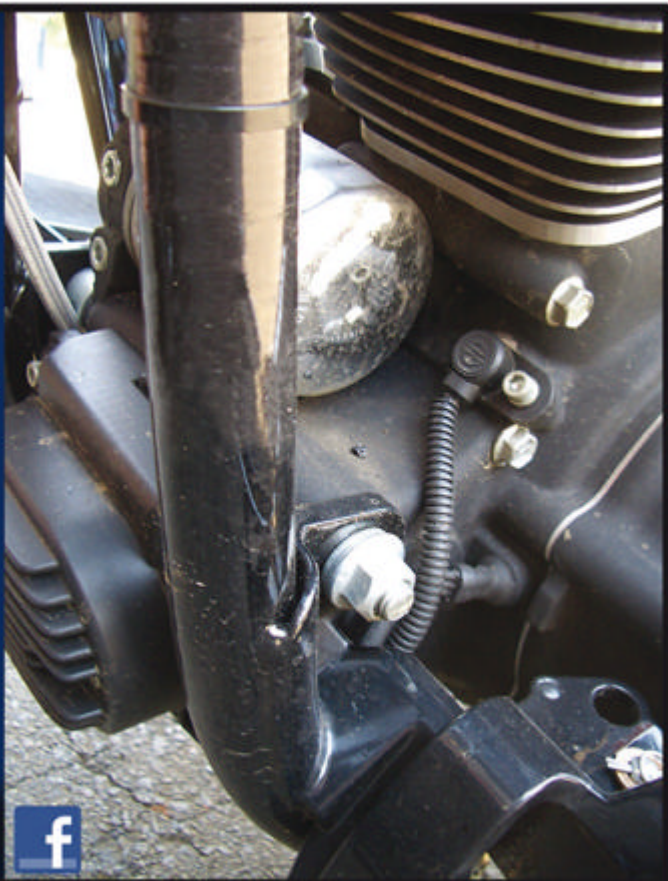
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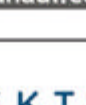
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MCSTAFF

# A HIGHER LEVEL OF STUPID

Sometimes Having More Information Can Actually Make You Dumber

I don't always ride like a squid, but when I do, I prefer to be connected to my buddies via Bluetooth-linked helmet communicators. If I were fishing for a theme for our annual, weeklong guy tour in the Carolina mountains, I suppose that would be as good as any. I might offer a weak defense involving the unintended consequences of advancing technology, but this would be nothing but equal measures of denial and the infantile logic that sometimes infects riders operating in groups.

Specifically, I'm referring to something I suspect every group riding at a sporting pace has discovered, tried, and—I'm hoping—discarded. It's the helmet communicator-assisted blind-curve pass. Do I need to explain how this works? The wonder of state-of-the-art intercoms stitched together means that a group of four—which we were—is a virtual communications network that can carry on conversations at speed as though standing in the hotel lobby. It will soon become abundantly obvious that when the lead passes a vehicle, he can instantly act as a rolling sensor package and radio back that it's clear for others

to pass, even though they don't have anything like enough sight distance.

Early in our weeklong trip, we got into this practice quite naturally. We didn't even discuss it; we just started doing it. The lead would pass and pick up a steady patter... "All clear, all clear, still good." And whoever wanted to pass, could, even on a tight sweeper with zero sight distance. In an instant, street momentarily becomes track, and there's only one word to describe it: thrilling. Well, there's another word too: lunacy.

Let's break it down. For a skilled rider accustomed to passing on tight curves, inside or outside, it's no big deal. Pick a line around the vehicle to be passed, look into the curve, and go. Just try to avoid stuffing the passee. Think of it as mindful aggression. Except, as should have been evident before we even tried it, it isn't. We soon noticed what we should have surmised in the first place: Drivers and even other riders tend to absolutely freak when passed on blind curves because they can't possibly know that the passing rider, by dint of the intercom, has virtual knowledge of a clear lane ahead. Understandably, all they see is a

wild-eyed, suicidal maniac screaming by and maybe two or three more about to.

This, we soon noticed, causes undesirable reactions among drivers and other riders. And I'm not talking about the middle-finger salute but swerves or hard braking. One hapless cruiser rider we swept by just about lost it on a curve.

But if that's not the most compelling reason to avoid the communicator-assisted blind pass, this is: It just scares people, and, as riders sharing the road, we shouldn't be doing that. Period. It reflects poorly on the sport and on us as individuals. We all know better, but in the adrenaline-suffused heat of a group ride, restraint is as rare as snow in July, so we do it anyway—even in our, um, mature group with no one younger than 40.

None of this is to suggest intercoms don't enhance safety; they do. I can't think of an example in riding where more information isn't better than less. But when having more information veers into aggression bordering on criminality, it's time to recalibrate. So we did. By week's end, the craziness receded and we reverted to passing the old-fashioned way. That's thrill enough, thanks.



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